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TRANSMITTAL OF ROADS CERTIFIED FOR CONSTRUCTION PACKAGE AND REMEDIAL ACTION WORK PLAN FOR THE HAUL ROAD AND REROUTED NORTH ENTRANCE - (THIS CONTAINS THE CONSTRUCTION PACKAGE - SMALL BINDER AND LARGE DRAWINGS)

08/07/96

DOE-1204-96
DOE-FN EPAS
~~100~~ 89
DESIGN

Department of Energy
Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

AUG 0 7 1996

DOE-1204-96

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF ROADS CERTIFIED FOR CONSTRUCTION PACKAGE AND REMEDIAL ACTION WORK PLAN FOR THE HAUL ROAD AND REROUTED NORTH ENTRANCE ROAD

This letter transmits the Roads Certified for Construction (CFC) Package and the Draft Final Remedial Action Work Plan (RAWP) for the Haul Road and Rerouted North Entrance Road. The CFC Package includes drawings for both the Haul Road and Rerouted North Entrance Road and Electrical Technical Specifications for the Haul Road.

There will be an addendum issued to the CFC Package to incorporate pertinent design review comments from U.S. Environmental Protection Agency (U.S. EPA) and the Ohio Environmental Protection Agency (OEPA) that were received on July 24, 1996, and July 29, 1996. This addendum information will be forwarded to U.S. EPA and OEPA upon completion. Responses to the referenced comments and the Final Design Package will be submitted to the agencies by August 24, 1996.

If you have any questions, please contact Rod Warner at (513) 648-3156.

Sincerely,

for Johnny W. Reising
Fernald Remedial Action
Project Manager

FN:Warner

Enclosure: As Stated

Recycled and Recyclable

cc w/enc:

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Haul Road
Electrical Specifications

Operable Unit 2
Project Order 158
August 1996
Revision 0

Environmental Remedial Action Project
Fernald Environmental Management Project
Fernald, Ohio
FERMCO Subcontract No. 2-21487

PARSONS

25 Merchant Street
Cincinnati, Ohio 45246

FOR INFORMATION ONLY

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Haul Road
Electrical Specifications

Operable Unit 2
Project Order 158
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Revision 0

Environmental Remedial Action Project
Fernald Environmental Management Project
Fernald, Ohio
FERMCO Subcontract No. 2-21487

25 Merchant Street
Cincinnati, Ohio 45246

U.S. DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

PROJECT ORDER 158

ELECTRICAL SPECIFICATIONS

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SECTION	TITLE	REV.	DATE
DIVISION 16 - ELECTRICAL			
16050	BASIC ELECTRICAL MATERIALS AND METHODS	0	08/02/96
16170	GROUNDING AND BONDING	0	08/02/96
16370	OVERHEAD POWER DISTRIBUTION	0	08/02/96
16500	LIGHTING	0	08/02/96

END OF SECTION

SECTION 16050
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Disconnect switches.

B. Conduit.

C. Wire and cable.

D. Nameplates.

E. Wire markers and cable tags.

F. Splicing and termination components.

G. Boxes.

H. Supporting devices.

1.2 RELATED SECTIONS

A. Section 16170 - Grounding and Bonding.

B. Section 16370 - Overhead Power Distribution.

C. Section 16500 - Lighting.

1.3 REFERENCE DRAWINGS

A. 92X-5900-E-00246 - Electrical - Site Plan Haul Road

B. 92X-5900-E-00247 - Electrical - Plan and Details - Pedestrian Crossing

1.4 REFERENCES

A. National Fire Protection Association (NFPA):

1.	NFPA 70	National Electrical Code, 1996 Edition.

B. American National Standards Institute (ANSI):

1.	ANSI C80.1-90	Rigid Steel Conduit-Zinc Coated.

C. Underwriters Laboratories Inc. (UL):

1.	UL 360-86	UL Standard for Safety Liquid-Tight Flexible Steel Conduit.
2.	UL 486A-91	UL Standard for Safety Wire Connectors and Soldering Lugs for Use with Copper Conductors.
3.	UL 510-94	UL Standard for Safety Polyvinyl Chloride, Polyethylene and Rubber Insulating Tape.
4.	Electrical Construction Materials Directory - 1995.	

D. National Electrical Manufacturers Association (NEMA):

1.	NEMA KS 1-90	Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).
2.	NEMA 250-91	Enclosures for Electrical Equipment (1,000 Volts Maximum).

1.5 SUBMITTALS

A. Product Data: Provide data for building wire and cable, rigid metal conduit, nameplates, and wire and cable identification tags. Include shop drawings and wiring diagrams.

B. Provide catalog sheets showing voltage, controller size, ratings and size of switching and overcurrent protective devices, short circuit ratings, dimensions, and enclosure details.

C. Submit for approval all test procedures. Submittal shall be at least 30 days prior to use.

D. Certificate of Conformance: Provide statement certifying that the materials supplied meet or exceed contract requirements.

E. Test Reports

1.6 QUALITY ASSURANCE PROGRAM

A. All work shall comply with NFPA 70. Use of conduit for equipment ground is prohibited.

B. Products shall be listed in the UL Electrical Construction Materials Directory, for the purpose specified and indicated.

PART 2 PRODUCTS

2.1 EQUIPMENT

A. Disconnect Switches

1. Fusible Switch Assemblies: NEMA KS 1, Type HD quick-make, quick-break, visible blade, load interrupter knife switch in Type 3R enclosures, NEMA 250, with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse Clips: Designed to accommodate Class R fuses. Terminals, minimum 75 degrees C rated.

2.2 MATERIALS

A. Conduit

1. Rigid steel, heavy wall, galvanized conduit conforming to ANSI C80.1. Conduit shall be 1/2 inch diameter minimum.
2. Liquid-tight flexible metal conduit conforming to UL 360. Conduit shall be 1/2 inch diameter minimum, 5 feet in length (maximum) unless indicated on drawings.
3. All conduit connections shall be NPT.

B. Wire and Cable

1. Single conductor, 600 volt insulated copper conductor. Conductors for power and lighting branch circuits shall not be smaller than No. 12 AWG. Conductors No. 12 AWG and larger shall be stranded. Conductors for control shall not be smaller than No. 14 AWG stranded. Conductors for Class 1 remote-control and signal circuits shall be enclosed in cable and shall comply with NFPA 70. Power and lighting conductor insulation shall be Type THW, XHHW, or THWN. Conductors required to be rated 90 degrees C in accordance with NFPA 70 shall be insulation Type XHHW-2 or THW-2.

C. Nameplates

1. Nameplates shall be engraved, three-layer laminated plastic, 5/16-inch bold style, black letters on white background.

D. Wire Markers and Cable Tags

1. Wire markers shall be single-conductor slip on, heat-shrinkable sleeve with typed or printed black letters on a white background. Wire markers shall be W. H. Brady Co. computer-printable "Bradysleeve" or approved equal.
2. Cable tags shall be rectangular, flat, non-heat shrinkable tags with 1/8-inch-high letters. Cable markers shall be Raychem-type TMS or approved equal.

E. Splicing and Termination Components

1. Wire connectors, UL 486A, as applicable.
2. Insulation tape, UL 510.
3. Provide solderless terminal lugs, rated 75 degrees C minimum, on stranded conductors.

F. Boxes

1. Junction and Pull Boxes
   a. Junction and pull boxes shall be sized as indicated in accordance with NFPA 70, Article 370.

b. Junction and pull boxes located outdoors shall have screwed, gasketed covers, and watertight hubs. Type 3R, according to NEMA 250.

G. Supporting Devices
1. Support channel shall be galvanized or painted steel.
2. Support hardware and accessories shall be corrosion resistant.
3. Supports shall be of all-welded construction.

PART 3 EXECUTION

3.1 SITE CONDITIONS

A. Ensure site is ready to receive work before start of construction.

3.2 ERECTION/INSTALLATION/APPLICATION

A. Conduit
1. Route conduit parallel or at right angles to building lines. Provide conduit supports at approximately 8-foot intervals. Route conduit so as not to create a hazard for tripping or to compromise head clearance. Minimum height above floor shall be 7 feet, 6 inches.
2. Cut conduit square using saw or pipecutter. All cut ends of conduit shall be reamed smooth.
3. Install no more than the equivalent of three 90 degree bends between junction boxes. Use hydraulic one-shot conduit bender or factory elbows for conduit diameter larger than 1-1/2 inch.
4. Use Form 8 conduit bodies to make sharp changes in direction. Avoid moisture traps, provide junction box with weep hole.
5. Provide cast metal boxes such as FS or FD in damp or wet locations.
6. Provide 1/8-inch nylon pull cord in empty conduits. Cap empty conduits to prevent entry of moisture and foreign objects.

7. Final conduit connections to motors or other vibrating equipment shall be made with approximately 3-foot liquid-tight flexible metal conduit.
8. Conduit and supports are to be field routed. They are not indicated explicitly on drawings.

B. Wire and Cable

1. Swab conduit before installing cable. Remove burrs, dirt, or other debris. For existing conduit, pull a mandrel through before pulling cable to verify roundness and bending radii.
2. When pulling cable into conduit, use wire pulling compound.
3. Splices shall be made only in outlet or junction boxes.
4. Provide equipment grounding conductor along with phase conductors in all conduits.
5. Multiconductor cables shall contain an integral ground conductor.
6. Grounding conductors shall be connected to equipment with compression lugs. Grounding connections shall be made to clean, dry surfaces. Scale, rust, grease, and dirt shall be removed from surfaces to which grounding connections are to be made.
7. Conductors shall be color coded. Conductors No. 6 AWG and larger shall be identified using colored tape at terminals and splice points. Conductors No. 8 AWG and smaller shall be identified using colored insulation or jacket. Color coding shall be as follows:

480Y/277V	Phase A	Yellow
	Phase B	Orange
	Phase C	Brown
	Neutral (grounded)	Gray
	Ground	Green
208Y/120V	Phase A	Black
	Phase B	Red
	Phase C	Blue
	Neutral (grounded)	White
	Ground	Green

Plant Fire	Red and Yellow
Alarm System	Brown and Yellow

C. Nameplates
   1. Clean surfaces prior to installing nameplates.
   2. Install nameplates parallel to equipment lines. Secure nameplates to equipment fronts using self-tapping screws.

D. Wire and Cable Markers
   1. Provide wire markers on each conductor in pull boxes and junction boxes and at each load connection. Provide cable tags in pull boxes for multiconductor cables.
   2. Wire and cable tags shall identify panel and circuit number or control wire number, as required.

E. Clearances
   1. Clearances from points of access to electrical equipment and other devices shall conform to the requirements of NFPA 70.
   2. All equipment control devices and other electrical equipment requiring operation or maintenance shall have a minimum working clearance of 3 feet from the surface of operation or access, unless greater clearance is required by NFPA 70.

F. Boxes
   1. Coordination of Box Locations
      a. Provide electrical boxes as indicated and as required for splices, taps, wire pulling, and equipment connections.
      b. Electrical box locations indicated are approximate unless dimensioned.
      c. Locate and install boxes to allow access.
      d. Coordinate mounting heights of boxes to ensure locations are useful.
   2. Pull and Junction Box Installation
      a. Support pull and junction boxes independently of conduit.

G. Supporting Devices

1. Installation of structural steel framing, concrete pads, etc., shall be complete before installing supporting devices.
2. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structures in accordance with manufacturer's recommendations as indicated.
3. Do not fasten supports to piping, ductwork, mechanical equipment, or conduit.
4. Do not drill structural steel members for installing support devices.
5. Fabricate supports from structural steel or steel channel. Rigidly bolt to structural steel to present a neat appearance. Use hexagon head bolts with spring lock washers under nuts.

3.3 QUALITY CONTROL

A. Power and Control Wire

1. All wires shall be tested for continuity. Wire insulation shall be megger tested between each conductor and ground. A 1,000-volt megger shall be used for insulation rated 600 volts. Minimum resistance shall be 100 megohms.

B. Utilization Equipment

1. Make electrical connections to utilization equipment in accordance with manufacturer's instructions.
2. Installation shall conform to the requirements of NFPA 70.

END OF SECTION

SECTION 16170
GROUNDING AND BONDING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Grounding electrodes and conductors.

B. Equipment grounding conductors.

1.2 RELATED SECTIONS

A. Section 16050 - Basic Electrical Materials and Methods.

B. Section 16370 - Overhead Power Distribution.

1.3 REFERENCES

A. InterNational Electrical Testing Association (NETA):
   1. NETA ATS-95 Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

B. National Fire Protection Association (NFPA):
   1. NFPA 70 National Electrical Code, 1996 Edition.

C. Underwriters Laboratories, Inc. (UL):
   1. UL 467-93 UL Standard for Safety Grounding and Bonding Equipment.
   2. Electrical Construction Materials Directory - 95.

1.4 SYSTEM DESCRIPTION

A. Rod electrode and fence grounding systems.

B. Grounding System Resistance: 5 ohms maximum.

1.5 SUBMITTALS

A. Product Data: Provide catalog sheets showing voltage, dimensions, details, and performance data.

B. Provide certification of ground testing instrumentation.

C. Certificates of Conformance: Provide statement certifying that the product supplied meets or exceeds contract requirements.

D. Provide test reports for ground system tests. Indicate overall resistance to ground and resistance of each electrode to ground.

1.6 QUALITY ASSURANCE PROGRAM

A. Manufacturer: Company specializing in manufacturing products specified in this section, with a minimum of 3 years experience.

B. Conform to requirements of NFPA 70.

C. Furnish products listed in the UL Electrical Construction Materials Directory as suitable for the purpose specified and indicated.

D. Provide certification of ground testing instrumentation according to NETA ATS.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers
   1. Mechanical Connectors
      a. Burndy.
      b. Ideal.
      c. Ilsco.
   2. Exothermic Connections
      a. Cadweld.
      b. Thermoweld.

2.2 MATERIALS

A. Rod Electrode
   1. Copper-clad steel, 3/4-inch diameter, 10-foot length.

B. Mechanical Connectors
   1. Bronze.

C. Wire
   1. Stranded copper.
      a. Grounding Conductor: Size to meet NFPA 70 requirements.

D. Grounding and bonding materials shall conform to UL 467.

PART 3 EXECUTION

3.1 SITE CONDITIONS

A. Verify that final backfill and compaction have been completed before driving rod electrodes.

B. Verify that underground utilities will not interfere with the proposed rod locations prior to driving rod electrodes.

3.2 ERECTION/INSTALLATION/APPLICATION

A. Install products in accordance with manufacturer's instructions.

B. Install rod electrodes at locations indicated on the drawings. Install additional rod electrodes as required to achieve specified resistance to ground.

C. Equipment Grounding Conductor: Provide separate, insulated conductor with each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

D. Connect ground conductors to reinforcing bars in foundation before pouring concrete. Tie to structural steel members by exothermic connection when they are installed.

E. Ground all metal equipment enclosures by attachment to ground rod system or to the structural steel.

F. Ground pole-mounted equipment and static line conductors as indicated on the drawings.

G. Fence Grounding: Fences shall be grounded with a ground rod at each fixed gate post and at each corner post:

1. Drive ground rods until the top is 12 inches below grade.
2. Attach a No. 4 AWG copper conductor, by fusion weld process, to the ground rods and extend it underground to the immediate vicinity of the fence post.
3. Lace the conductor vertically into 12 inches of fence mesh and fasten it by two approved bronze compression fittings, one to bond the wire to the post and the other to bond the wire to the fence. Each gate section shall be bonded to its gatepost by a 1/8-inch by 1-inch flexible braided copper strap and ground post clamps. Clamps shall be of the anti-electrolysis type.

3.3 QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation as defined by contract documents and manufacturer's instructions. Accurately record as-built locations of grounding electrodes where different from drawings, and submit to FERMCO. Test instrumentation shall conform to NETA ATS. Provide certification for instrumentation.

B. Measure the system's resistance to the ground; perform testing in accordance with instrument manufacturer's recommendations using the fall-of-potential method. Provide written test reports indicating overall resistance to ground and resistance of each electrode to ground.

END OF SECTION

SECTION 16370
OVERHEAD POWER DISTRIBUTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Poles.

B. Pole hardware.

C. Pole-mounted distribution transformers.

1.2 RELATED SECTIONS

A. Section 16050 - Basic Electrical Materials and Methods.

B. Section 16170 - Grounding and Bonding.

1.3 REFERENCES

A. National Fire Protection Association (NFPA):

1. NFPA 70	National Electrical Code, 1996 Edition.

B. American National Standards Institute (ANSI):

1. ANSI C2-93	National Electrical Safety Code.
2. ANSI C57.12.20-88	Transformers - Overhead-Type Distribution Transformers, 500 kVA and Smaller: High-Voltage, 34,500 Volts and Below; Low-Voltage, 7970/13 800Y Volts and Below.
3. ANSI C135.1-79	Galvanized Steel Bolts and Nuts for Overhead Line Construction.
4. ANSI O5.1-92	Wood Poles Specifications and Dimensions.

C. American Society for Testing and Materials (ASTM):

1. ASTM D698-91 — Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3).

D. American Wood-Preservers Association (AWPA):

1. AWPA C4-89 — Poles - Pressure Process.

E. National Electrical Manufacturers Association (NEMA):

1. NEMA WC 7-88 — Cross-Linked-Thermosetting-Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

F. Underwriters Laboratories, Inc. (UL):

1. Electrical Construction Materials Directory - 95.
2. UL 96-94 — UL Standard for Lightning Protection Components.

1.4 SYSTEM DESCRIPTION

A. Overhead distribution consisting of low-voltage circuits and transformers, as indicated on drawings.

1.5 SUBMITTALS

A. Product Data: Provide catalog sheets showing voltage, dimensions, details, and performance data.

B. Certificates of Conformance: Provide statement certifying that the product supplied meets or exceeds contract requirements.

1.6 **QUALITY ASSURANCE PROGRAM**

A. Manufacturer: Company specializing in manufacturing products specified in this section, with a minimum of 3 years experience.

B. Conform to requirements of NFPA 70 and ANSI C2.

C. Products shall be listed in the UL Electrical Construction Materials Directory, for the purpose specified and indicated.

D. Installation shall comply with ANSI C2, heavy loading district, Grade B construction.

1.7 **DELIVERY, STORAGE, AND HANDLING**

A. Protect poles from damage and decay by stacking to provide free circulation of air. Maintain 1 foot (300 mm) minimum spacing between bottom pole and ground or ground vegetation. Do not store poles above decayed or decaying wood.

B. Stack poles stored for more than 2 weeks on decay-resistant skids arranged to support poles without noticeable pole distortion.

C. Handle treated poles with tools which will not produce an indentation greater than 1 inch (25 mm) deep. Do not drag treated poles along ground. Do not apply tools to that section of treated pole between 1 foot (300 mm) above and 2 feet (600 mm) below ground line.

PART 2 PRODUCTS

2.1 MATERIALS

A. Poles

1. Wood Poles: ANSI O5.1; treated southern pine poles of length and class indicated.
2. Select poles for straightness, minimum sweeps, and short crooks.
3. Preservative: ANSI O5.1 and AWPA C4, Pentachlorophenol.
4. Apply preservative to poles as required by AWPA C4 with minimum net retention of 12 lbs/ft^3 (285 kg/m^3). Obtain complete sapwood penetration.

B. Pole Hardware

1. Miscellaneous Pole Hardware: Hot-dipped galvanized after fabrication.
2. Eye Bolts and Nuts: ANSI C135.1.
3. Ground Rods: Copperweld 3/4-inch O.D. by 10 feet, 0 inches long.
4. Butt Plate: Copper.
5. Ground Wire: Soft drawn solid copper conductors, 4 AWG minimum size.
6. Air Terminal: UL 96; 18-inch copper air terminal.

C. Line Conductors

1. Secondary Conductors: Copper, quadraplex, three insulated conductors and one bare neutral cable, with 600 volt cross-linked polyethylene insulation for phase conductors conforming to NEMA WC 7.

D. Pole Mounted Distribution Transformers

1. Transformers: ANSI C57.12.20, single phase, oil filled, self-cooled with primary bushings and secondary terminations, Basic Impulse Level of 125 kV, temperature rise of 65 degrees C above 30 degrees C ambient, ratings as indicated. Provide standard primary taps with externally operated tap changer and standard accessories with dial type thermometer.

PART 3 EXECUTION

3.1 SITE CONDITIONS

A. Verify that field measurements are as shown on drawings.

B. Verify that there are no underground utilities located below the poles prior to installation.

3.2 ERECTION/INSTALLATION/APPLICATION

A. Install products in accordance with manufacturer's instructions.

B. Plug unused holes in poles, using treated wood dowel pins. Treat field-cut gains and field-bored holes with preservative.

C. Shorten poles when required by cutting from top end. Apply hot preservative to shortened end of pole.

D. Set poles in straight line. Place curved poles with curvature in line with lead pole. Maintain an even grade.

E. Dig setting holes large enough to permit use of power tampers to full depth. Place earth in maximum 6-inch (150 mm) layers and pack to 95 percent density per ASTM D698.

F. Rake poles located at corners, angles, and dead ends so that poles are vertical after line installation.

G. Do not install poles along the edge of cuts and embankments or where soil may be washed out.

H. Identify each pole using aluminum marker stamped with characters 2-1/2 inches (60 mm) high, minimum. Locate to provide maximum visibility from roadway and fasten with aluminum nails. Obtain identifying numbers from FERMCO.

I. Minimum depths in normal firm ground, measured from lower side of pole:

OVERALL LENGTH	DEPTH FOR STRAIGHT LINES	DEPTH AT CURVES, CORNERS, AND POINTS OF EXTRA STRAIN
30'	5'-6"	5'-6"
35'	6'-0"	6'-0"
40'	6'-6"	6'-6"
45'	7'-0"	7'-6"
50'	7'-6"	8'-0"
60'	8'-0"	8'-6"

J. Install conductors to ANSI C2.

K. Use small-diameter steel probe to verify that area is free of underground obstructions prior to installation of poles.

END OF SECTION

SECTION 16500
LIGHTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Luminaires and lampholders.

B. Ballasts.

C. Lamps.

1.2 RELATED SECTIONS

A. Section 16050 - Basic Electrical Materials and Methods.

1.3 REFERENCES

A. National Fire Protection Association (NFPA):
1. NFPA 70 National Electrical Code, 1996 Edition.

B. American National Standards Institute (ANSI):
1. ANSI C82.4-92 Ballasts for High Intensity Discharge and Low Pressure Sodium Lamps (Multiple Supply Type).

C. Underwriters Laboratories, Inc. (UL):
1. Electrical Construction Materials Directory - 95.

1.4 SYSTEM DESCRIPTION

A. Lighting fixtures and appurtenances as indicated.

1.5 SUBMITTALS

A. Light Fixture Mounting Detail: Submit the proposed fixture mounting details for approval by FERMCO.

B. Product Data: Provide catalog sheets showing voltage, dimensions, enclosure details, and performance data including luminaire light pattern and beam data.

C. Certificates of Conformance: Provide statement certifying that the product supplied meets or exceeds contract requirements.

D. Operation and Maintenance Data: Provide replacement parts list and recommended maintenance procedures and intervals.

1.6 QUALITY ASSURANCE PROGRAM

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum 3 years experience.

B. Conform to the requirements of NFPA 70.

C. Products shall be listed in the UL Electrical Construction Materials Directory, for the purpose specified and indicated.

PART 2 PRODUCTS

2.1 EQUIPMENT

A. Luminaires

1. Furnish high pressure sodium stanchion mounted fixtures as indicated.
2. Factory install ballasts, lamps, and accessories.

2.2 ACCESSORIES

A. Ballasts
   1. High Intensity Discharge (HID) Ballast:
      a. Description: ANSI C82.4 HID lamp ballast.
      b. Description: HID lamp ballast.
      c. Provide ballast suitable for lamp specified.
      d. Voltage: Match luminaire voltage.

B. Lamps
   1. High-Pressure Sodium Lamps: Clear, suitable for ballast, furnished in luminaire, and for all burning positions.

C. Photoelectric Control
   1. Control above maximum footcandles: provide with adjustable cutoff point.
   2. Minimum load control: 2000 watts, 120 Volts.
   3. Provide photoelectric controls for exterior lighting.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine each luminaire to determine suitability for lamps specified.

3.2 ERECTION/INSTALLATION/APPLICATION

A. Install in accordance with manufacturer's instructions.

3.3 QUALITY CONTROL

A. Operate each luminaire after installation and connection. Inspect for proper connection and operation.

3.4 ADJUSTING

A. Relamp luminaires that have failed lamps at substantial completion.

3.5 CLEANING

A. Clean electrical parts to remove conductive and deleterious materials.

B. Remove dirt and debris from enclosure.

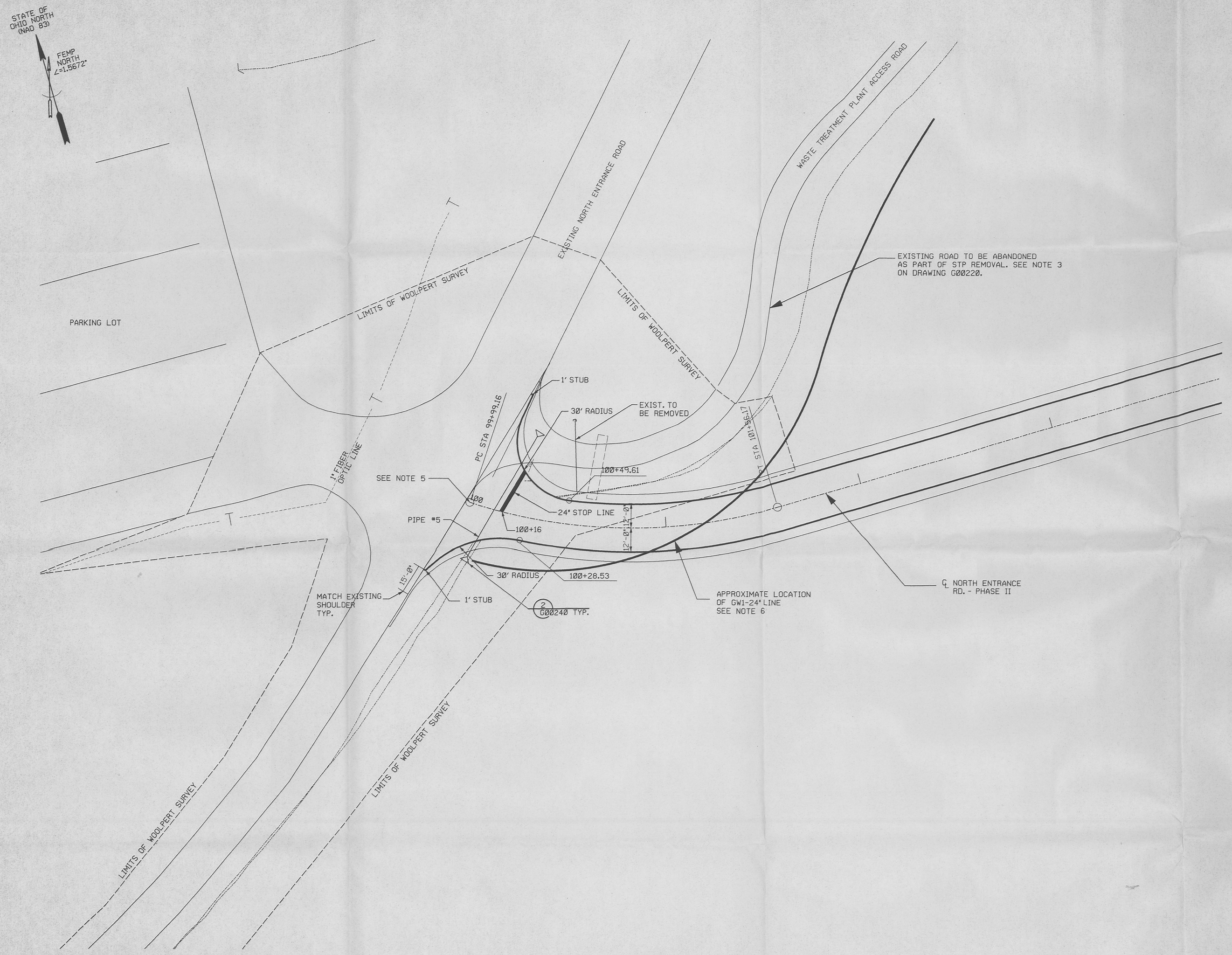
C. Clean photometric control surfaces as recommended by manufacturer.

D. Clean finishes and touch up damage.

3.6 DEMONSTRATION

A. Provide minimum of 2 hours demonstration of luminaire operation.

END OF SECTION



NOTES

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1. DETAILS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00220.
2. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219.
3. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00227.
4. SEE DRAWING 92X-5900-G-00236 FOR TRAFFIC CONTROL DEVICES.
5. THE SUBCONTRACTOR WILL TRANSITION THE PAVEMENT TO MEET THE EXISTING NORTH ACCESS ROAD. SEE SUPERELEVATION TABLE ON DRAWING 92X-5900-G-00235.
6. THE RELOCATION OF THE GW1-24' LINE SHALL BE DONE BY FERMCO PRIOR TO PHASE II CONSTRUCTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00227	CROSS SECTIONS - SHEET 1 OF 4
92X-5900-G-00235	SUPERELEVATION TABLES
92X-5900-G-00236	MAINTENANCE OF TRAFFIC

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
INTERSECTION DETAILS
SHEET 2 OF 2

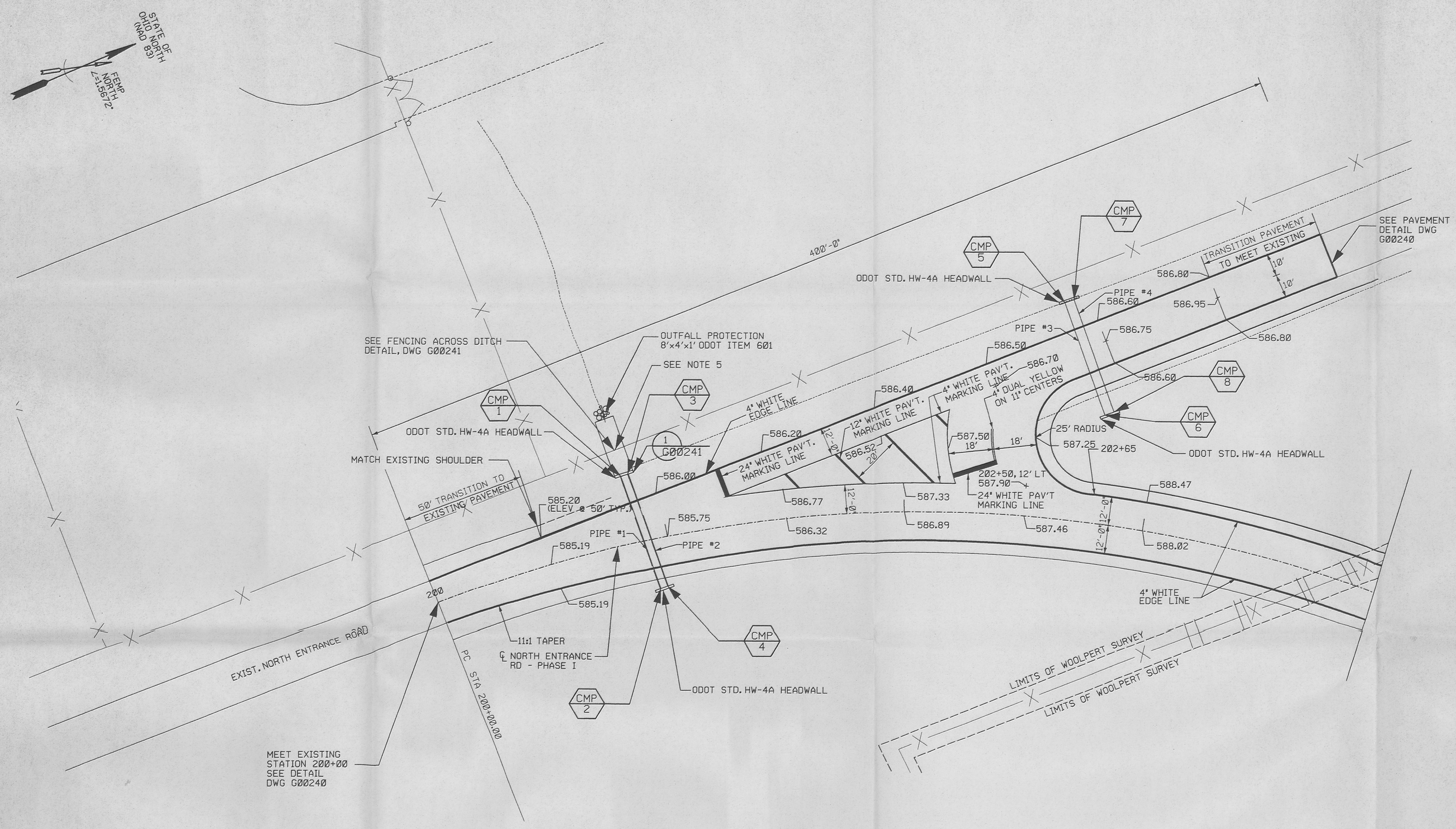
47

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1' = 20'	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00232	G0017	0



NOTES

1. DETAILS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00225
2. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219
3. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00219.
4. SEE DRAWING 92-5900-G-00236 FOR TRAFFIC CONTROL DEVICES
5. TEMPORARY REMOVAL OF FENCE TO BE COORDINATED WITH FERMCO.
6. THE EXISTING FIBER OPTIC AND TELEPHONE LINE ARE TO BE RELOCATED BY FERMCO PRIOR TO THE START OF PHASE I CONSTRUCTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00230	CROSS SECTIONS - SHEET 4 OF 4
92X-5900-G-00236	MAINTENANCE OF TRAFFIC
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2
92X-5900-G-00241	GENERAL DETAILS - SHEET 2 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

STATE OF OHIO JOHN M. WOOLPERT E-046579 REGISTERED PROFESSIONAL ENGINEER

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

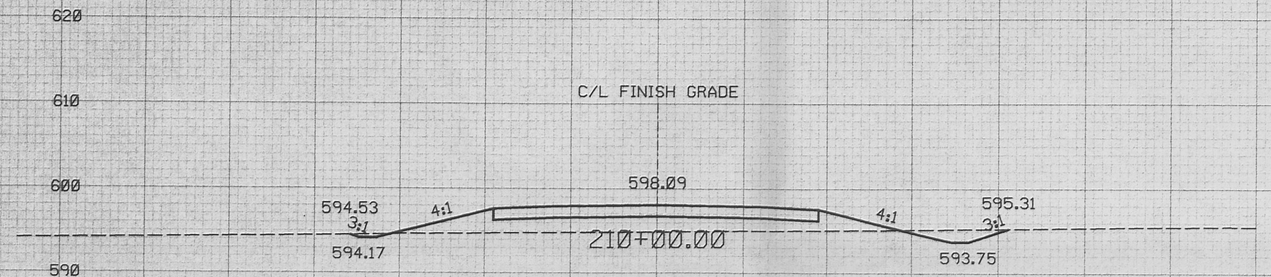
PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

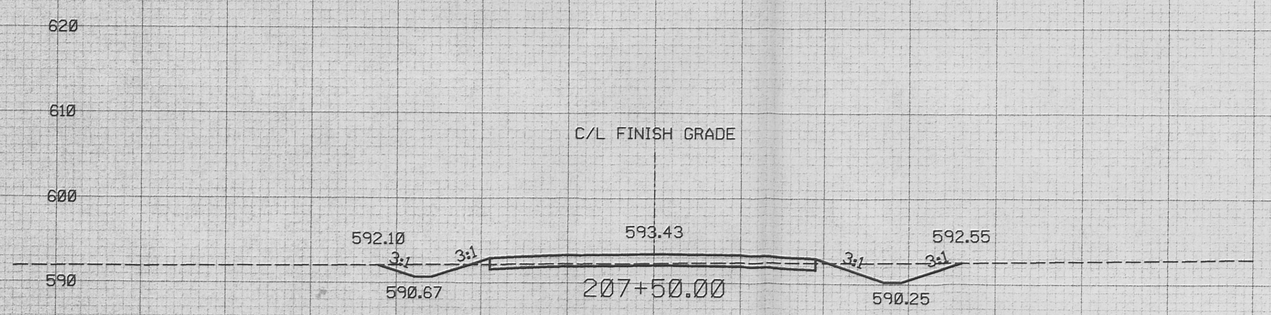
DRAWING TITLE
CIVIL
INTERSECTION DETAIL
SHEET 1 OF 2

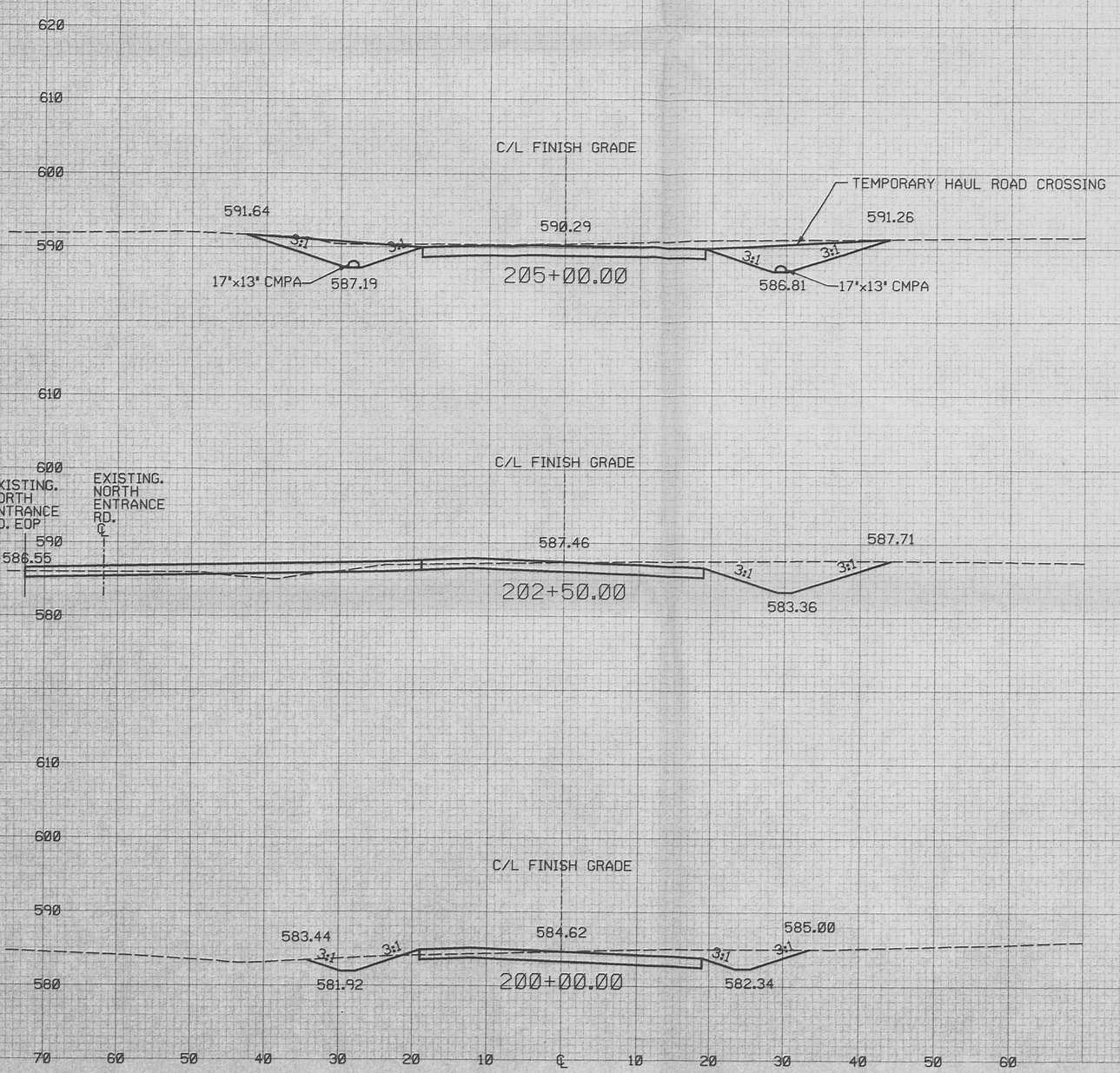
46

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE 1" = 20'	CLASS
SUBMITTED FOR APPROVAL A-E DATE 7/25/96		FERMCO CRU APPROVAL N/A DATE		FERMCO PROJECT NUMBER 20120	
DOE PROJECT NO.	FEMP PROJECT NO. WBS 1.1.1.1.2.3.6 00-90701	DRAWING INDEX CODE NO. 92X-5900-G-00231		SHEET NO. G0016	REV. NO. Ø

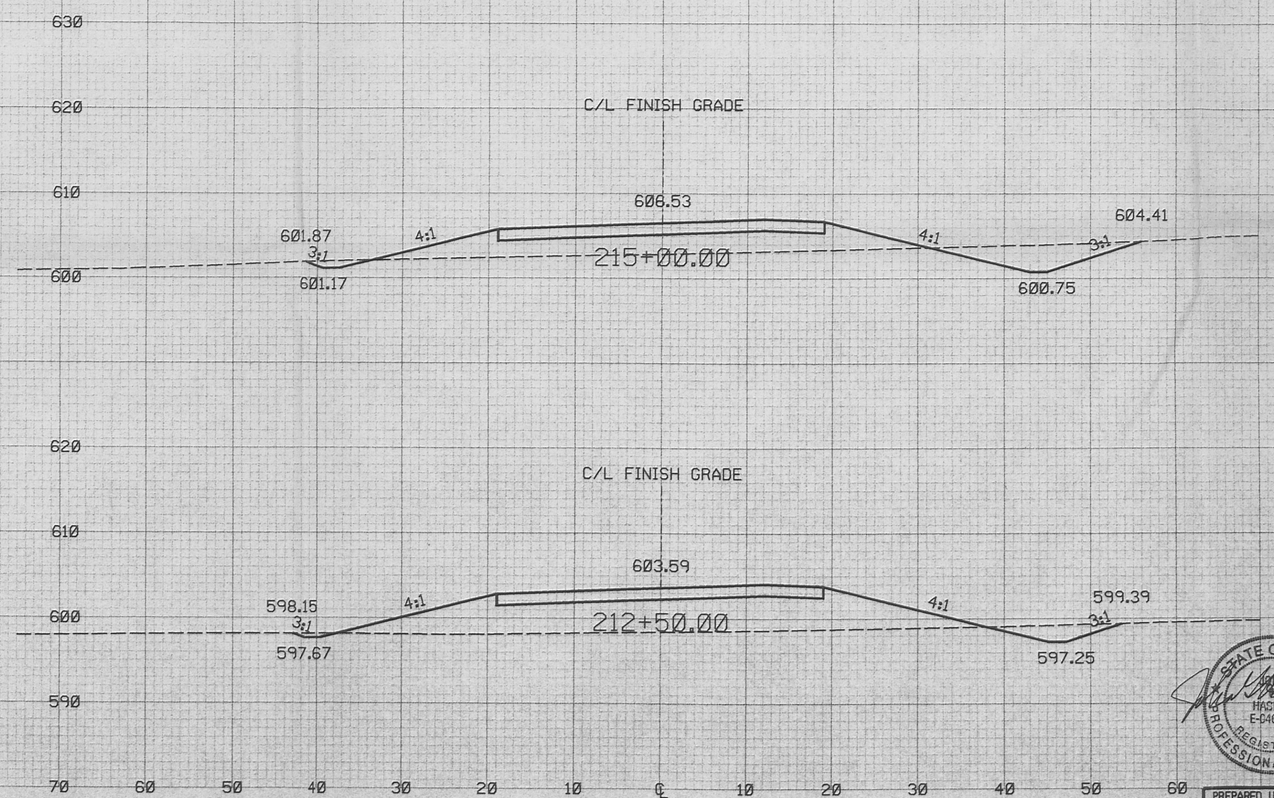
PREPARED UNDER PARSONS PROJECT ORDER NUMBER OU2/PO158







1" = 10'- 0" VERTICAL



1" = 10'- 0" HORIZONTAL

NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00225 AND 92X-5900-G-00226.
3. PROPOSED FORESLOPES AND BACKSLOPES VARY AS SHOWN.
4. BACKSLOPE TO BE 2:1 SLOPE WHEN HEIGHT OF CUT IS GREATER THAN 5'.
5. SECTIONS IDENTIFY EXISTING AND FINISH GRADE ONLY. UNDERGRAOUND AND SURFACE FEATURES NOT SHOWN. SEE PLAN AND PROFILE FOR LOCATION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00226	PLAN AND PROFILE - SHEET 7 OF 7

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERNCO	DATE
				INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 4 OF 4

45

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

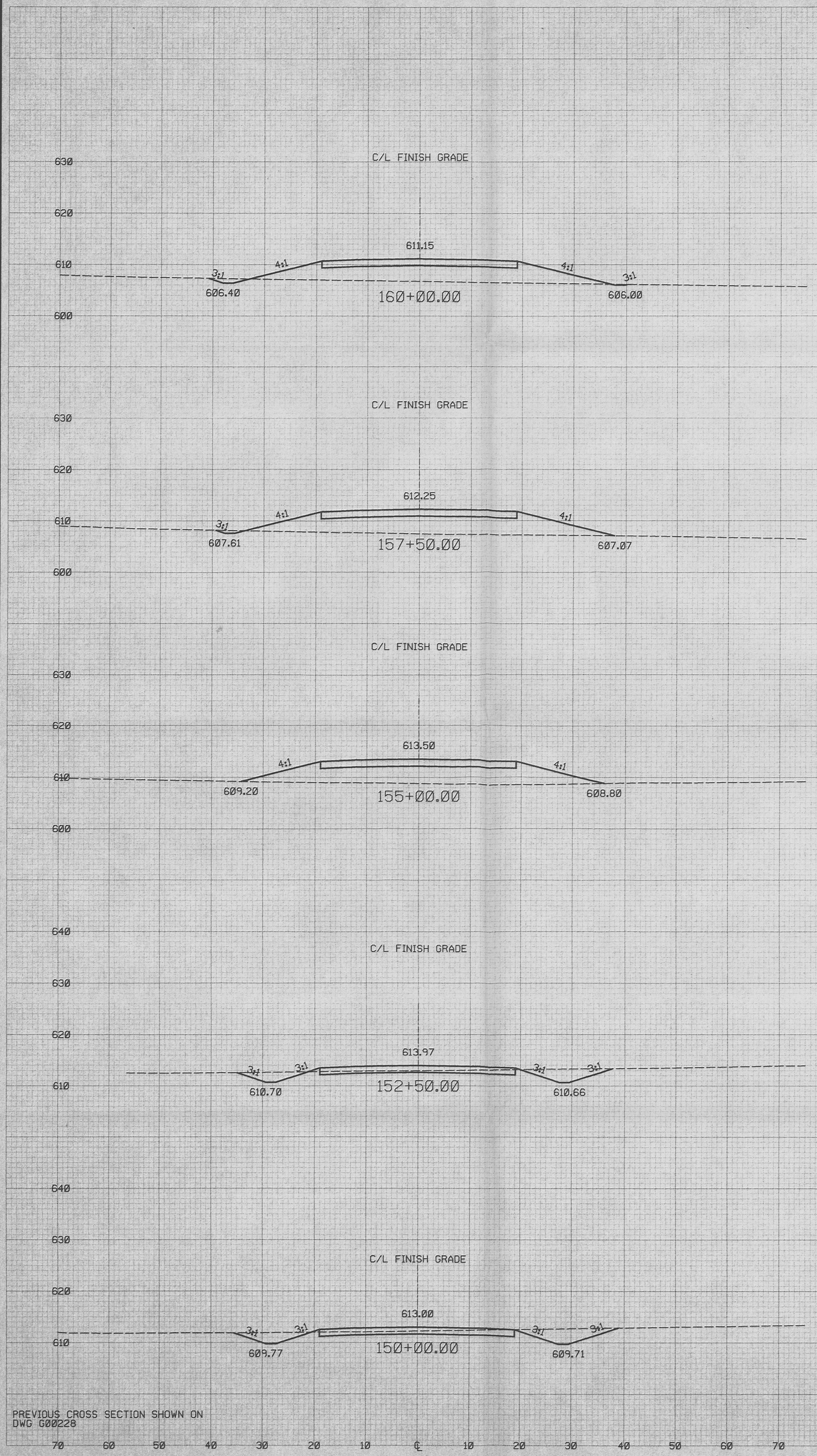
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

SUBMITTED FOR APPROVAL	FERNCO CRU APPROVAL	FERNCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00230	G0015	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

STATE OF OHIO — FRED LUP — E-24670 — REGISTERED PROFESSIONAL ENGINEER



NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00223 AND 92X-5900-G-00224.
3. PROPOSED FORESLOPES AND BACKSLOPES VARY AS SHOWN.
4. BACKSLOPE TO BE 2:1 SLOPE WHEN HEIGHT OF CUT IS GREATER THAN 5'.
5. SECTIONS IDENTIFY EXISTING AND FINISH GRADE ONLY. UNDERGRAOUND AND SURFACE FEATURES NOT SHOWN. SEE PLAN AND PROFILE FOR LOCATION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-G-00224	PLAN AND PROFILE - SHEET 5 OF 7
92X-5900-G-00228	CROSS SECTIONS - SHEET 2 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

STATE OF OHIO — JOHN M. PHILLIP — E-040573 — REGISTERED PROFESSIONAL ENGINEER

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 3 OF 4

44

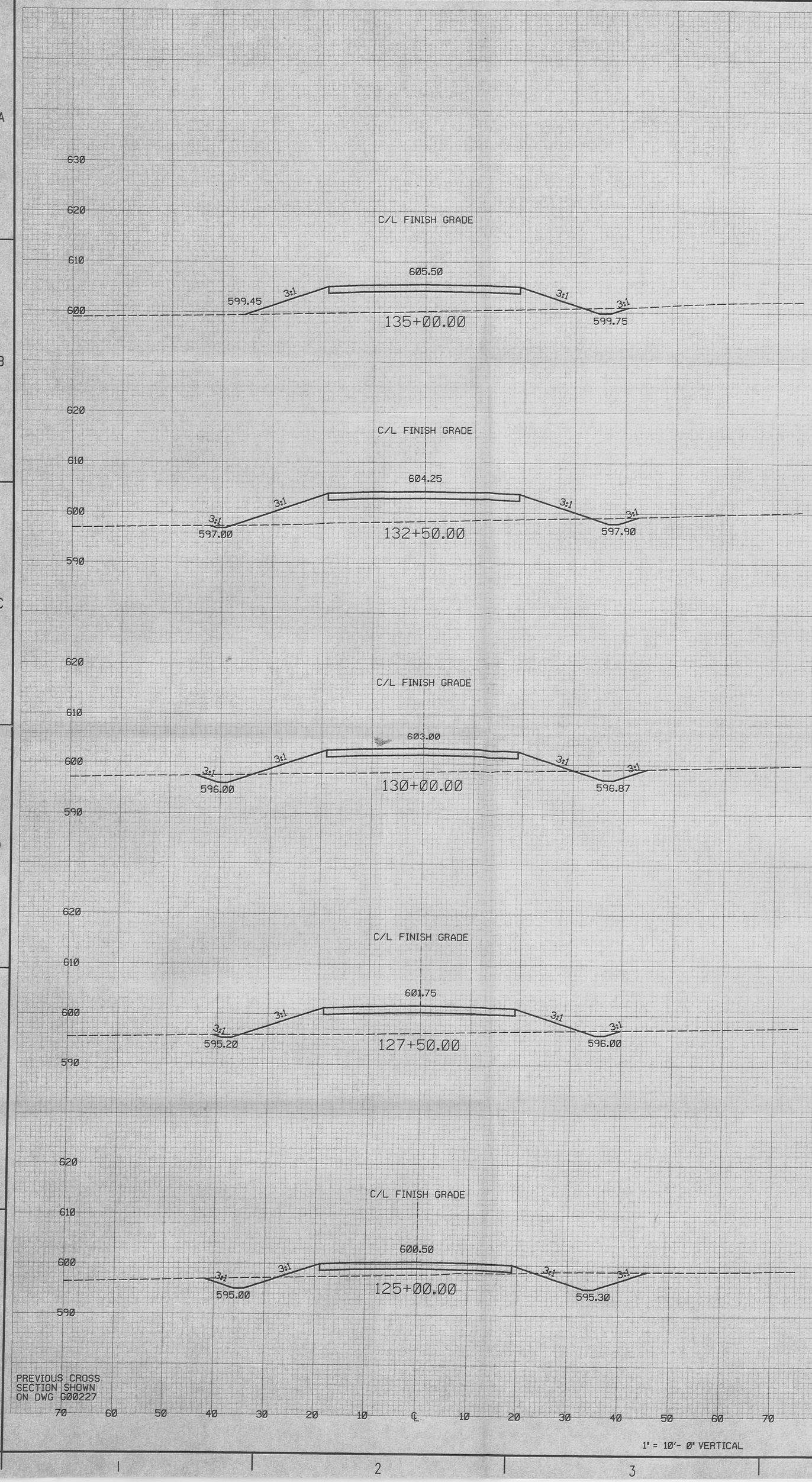
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95	John P. Phillip	7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

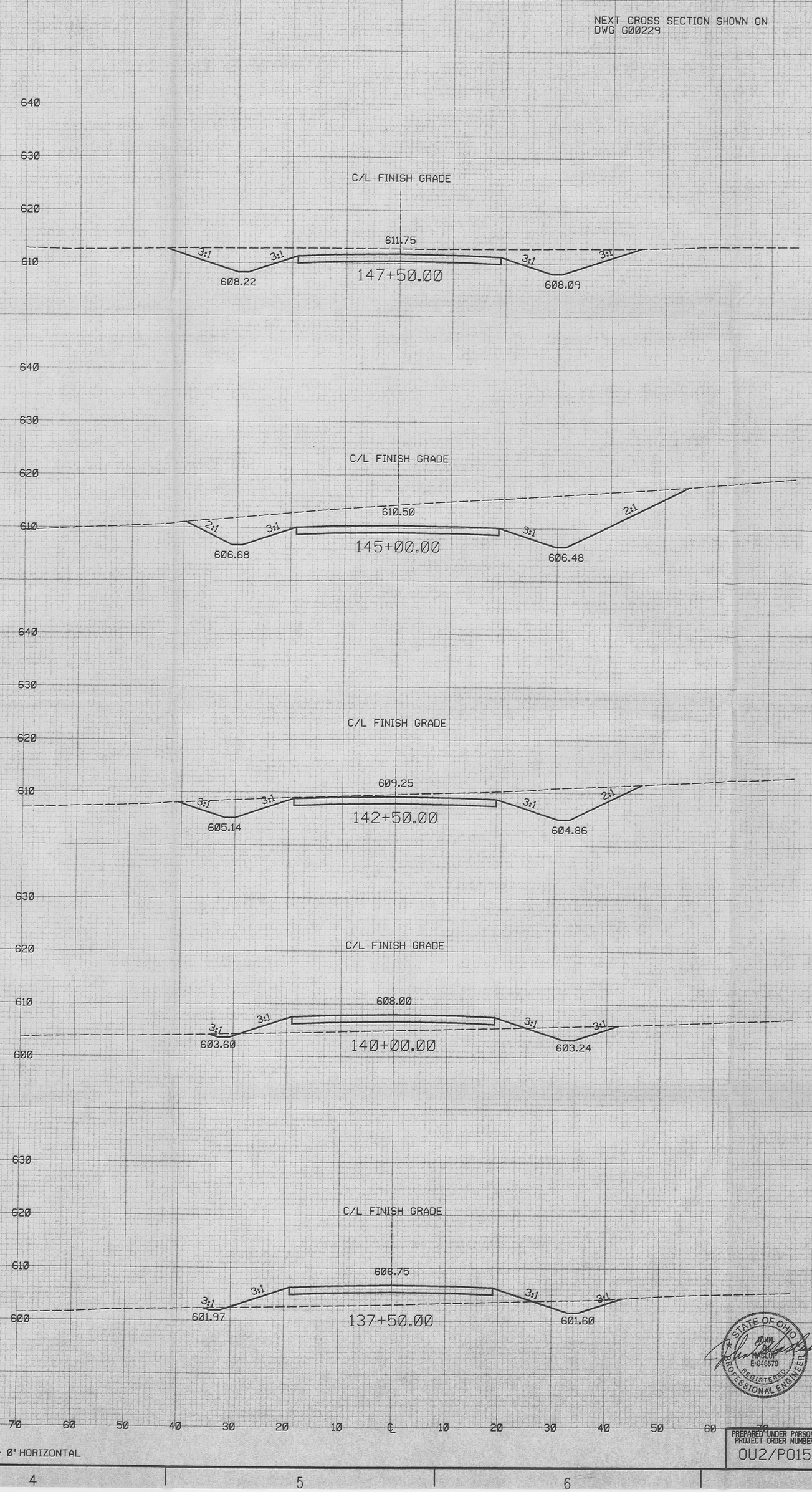
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00229	G0014	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158



PREVIOUS CROSS SECTION SHOWN ON DWG G00227



70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

1" = 10'- 0" VERTICAL 1" = 10'- 0" HORIZONTAL

NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00221, 92X-5900-G-00222 AND 92X-5900-G-00223.
3. PROPOSED FORESLOPES AND BACKSLOPES VARY AS SHOWN.
4. BACKSLOPE TO BE 2:1 SLOPE WHEN HEIGHT OF CUT IS GREATER THAN 5'.
5. SECTIONS IDENTIFY EXISTING AND FINISH GRADE ONLY. UNDERGRAOUND AND SURFACE FEATURES NOT SHOWN. SEE PLAN AND PROFILE FOR LOCATION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00221	PLAN AND PROFILE - SHEET 2 OF 7
92X-5900-G-00222	PLAN AND PROFILE - SHEET 3 OF 7
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-G-00227	CROSS SECTIONS - SHEET 1 OF 4
92X-5900-G-00229	CROSS SECTIONS - SHEET 3 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 2 OF 4

43

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

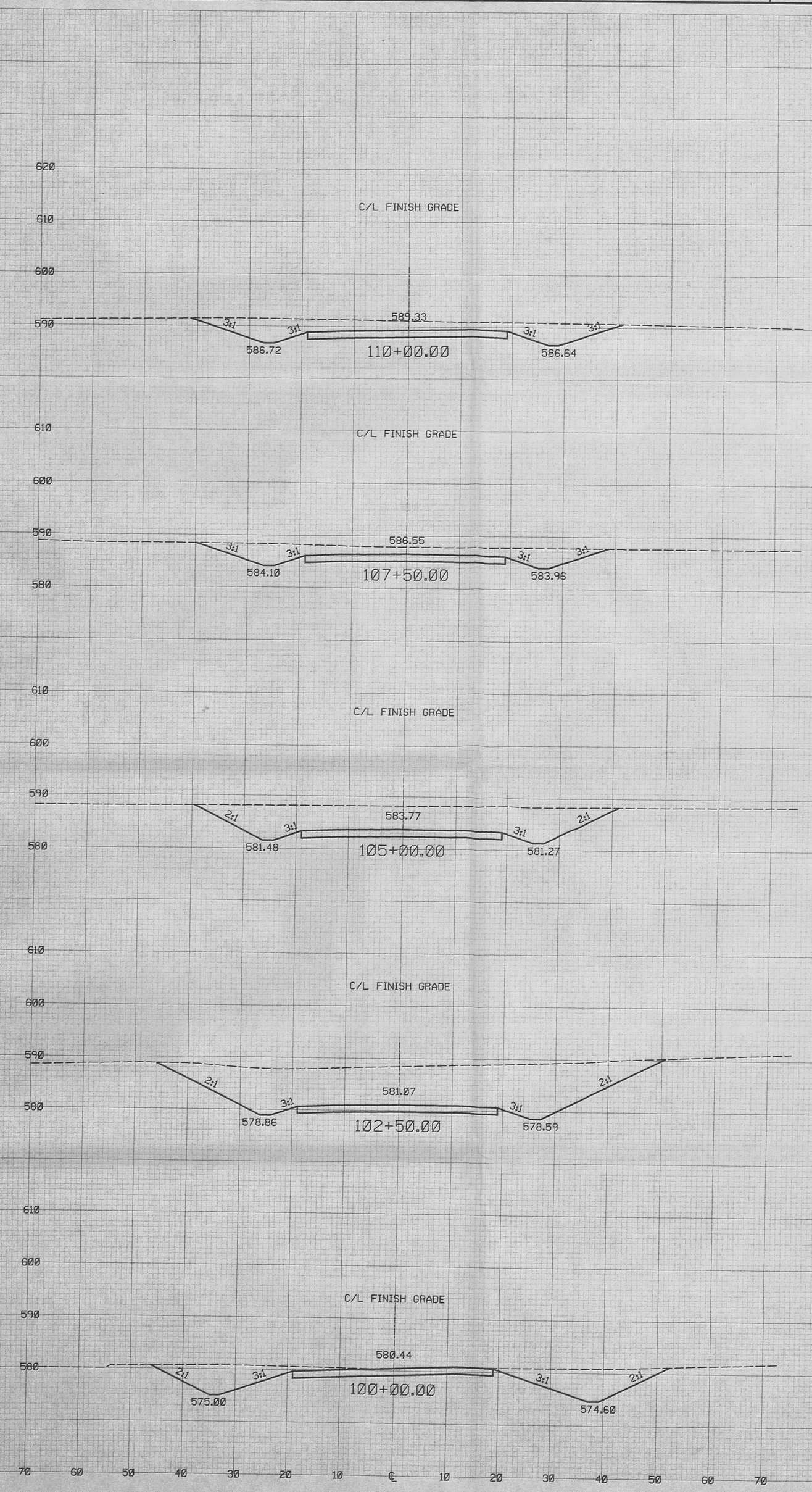
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

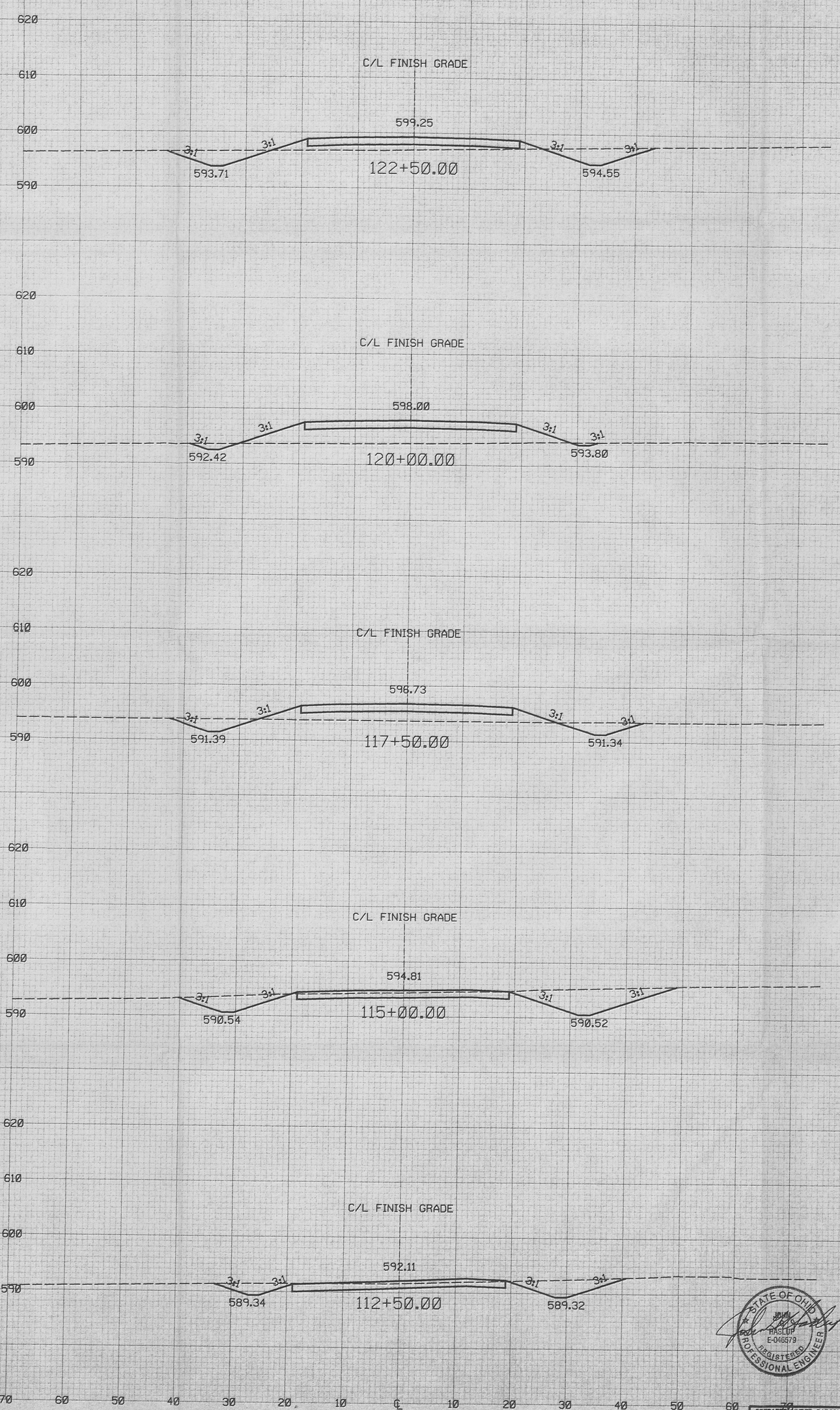
DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00228	G0013	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER OU2/P0158

STATE OF OHIO JOHN M. ULLOM E-40-0579 REGISTERED PROFESSIONAL ENGINEER



NEXT CROSS SECTION SHOWN ON DWG G00228



NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00219.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00220 AND 92X-5900-G-00221.
3. PROPOSED FORESLOPES AND BACKSLOPES VARY AS SHOWN.
4. SUBGRADE TO BE INSPECTED, SCARIFIED 6" AND COMPACTED TO AT LEAST 90% PRIOR TO PLACEMENT OF GRAVEL BASE.
5. BACKSLOPE TO BE 2:1 SLOPE WHEN HEIGHT OF CUT IS GREATER THAN 5'.
6. SECTIONS IDENTIFY EXISTING AND FINISH GRADE ONLY. UNDERGRAOUND AND SURFACE FEATURES NOT SHOWN. SEE PLAN AND PROFILE FOR LOCATION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00221	PLAN AND PROFILE - SHEET 2 OF 7
92X-5900-G-00228	CROSS SECTIONS - SHEET 2 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

STATE OF OHIO — JAMES M. UHLER — E-046879 — REGISTERED PROFESSIONAL ENGINEER

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 1 OF 4

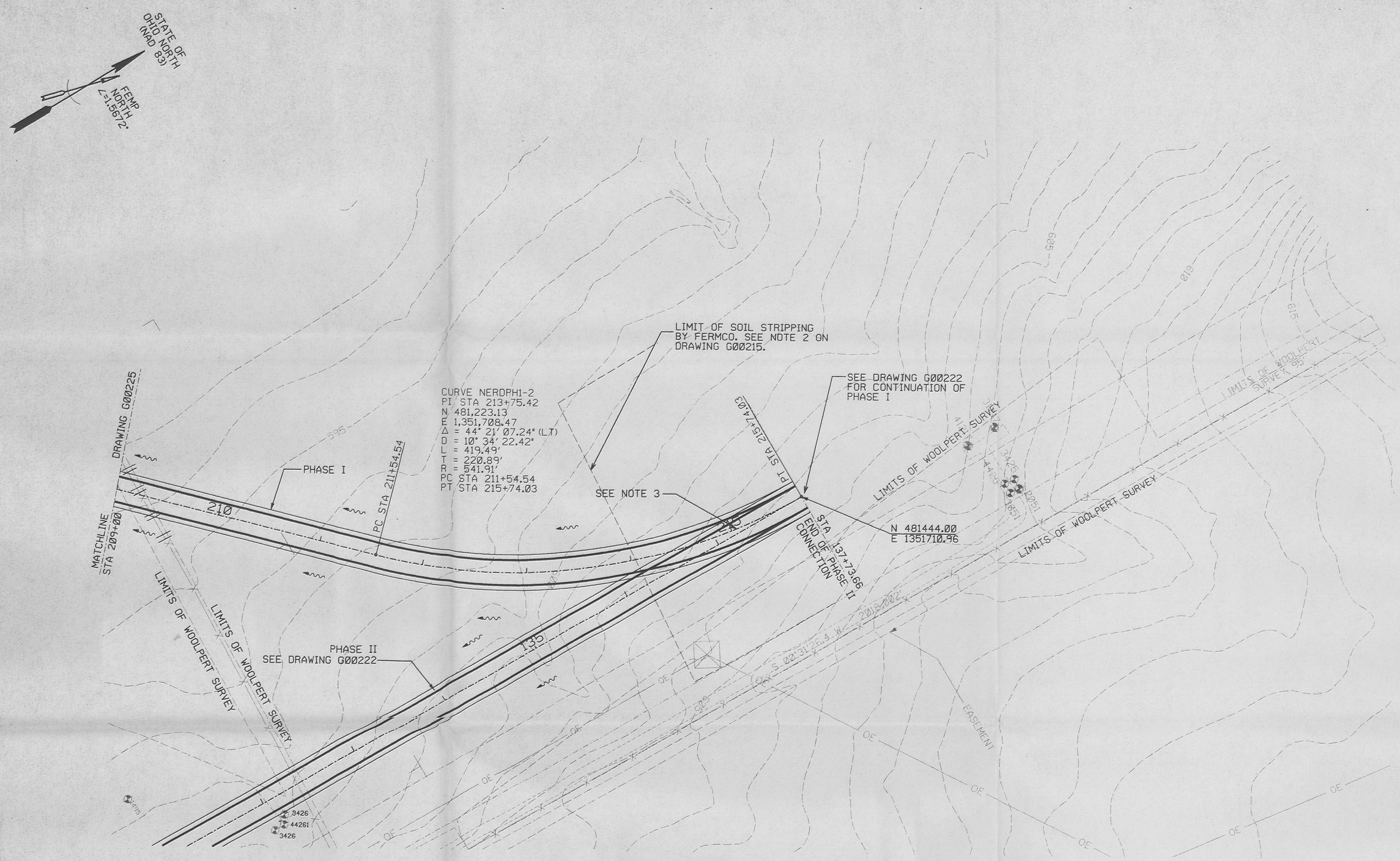
42

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

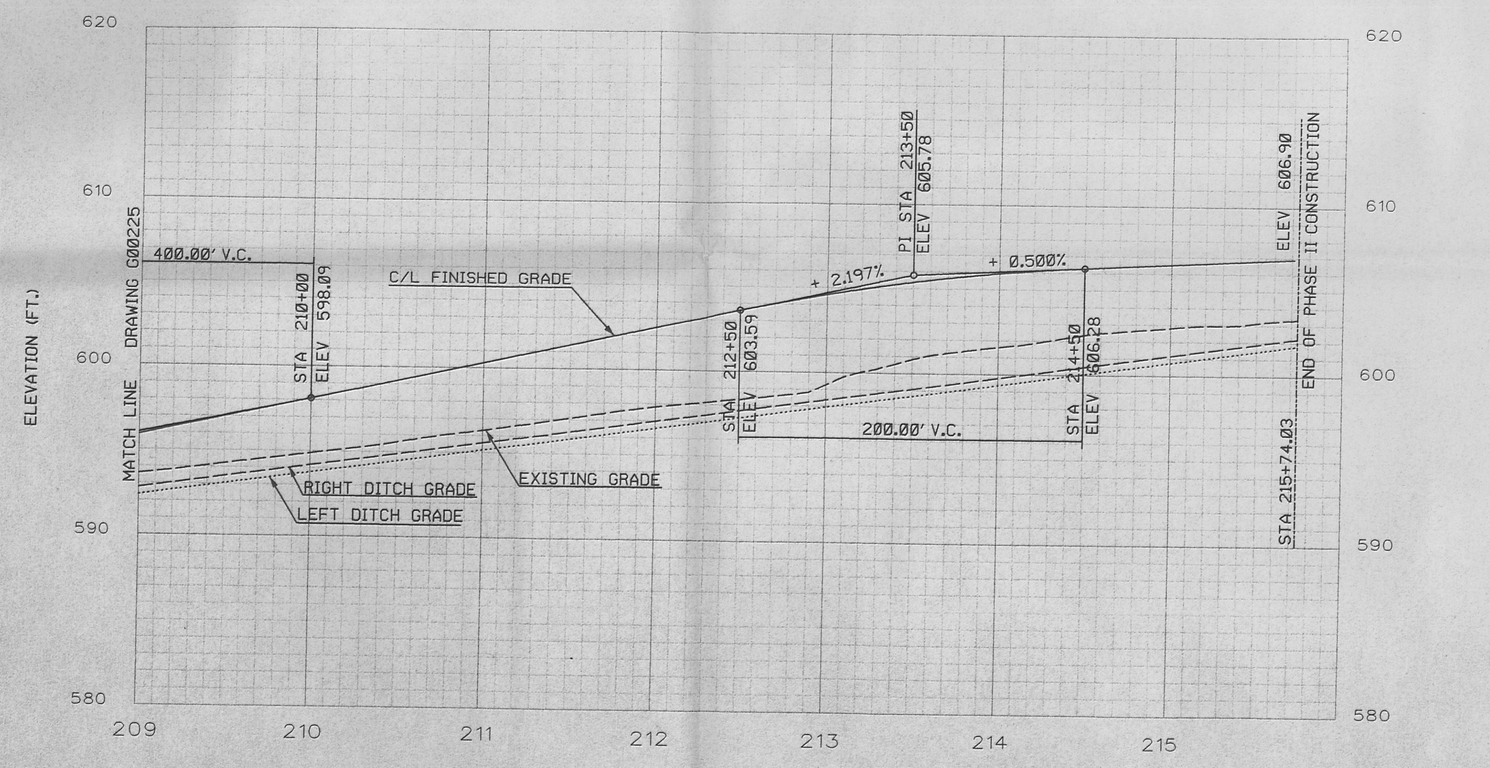
PLANT/BLDG. NO. — FLOOR — SCALE: 1" = 10' — CLASS

SUBMITTED FOR APPROVAL: A-E DATE 7/25/96 — FERMCO CRU APPROVAL: N/A DATE — FERMCO PROJECT NUMBER: 20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6. 00-90701	92X-5900-G-00227	G0012	0



PLAN
1"=50'



PROFILE
1" = 5'- 0" VERTICAL 1" = 50' - 0" HORIZONTAL

NOTES

364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. SEE DRAWINGS 92X-5900-G-00228 AND 92X-5900-G-00230 FOR CROSS SECTIONS.
3. PORTION OF THE PHASE I ROADWAY SHALL BE REMOVED AS PART OF PHASE II CONSTRUCTION.
4. REMOVE AND STOCKPILE EXISTING FENCE AS NEEDED TO CONSTRUCT ROAD. COORDINATE WITH FERMCO PRIOR TO PERFORMING WORK.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00215	SITE PLAN
92X-5900-G-00222	PLAN AND PROFILE - SHEET 3 OF 7
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00228	CROSS SECTIONS - SHEET 2 OF 4
92X-5900-G-00230	CROSS SECTIONS - SHEET 4 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE	
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

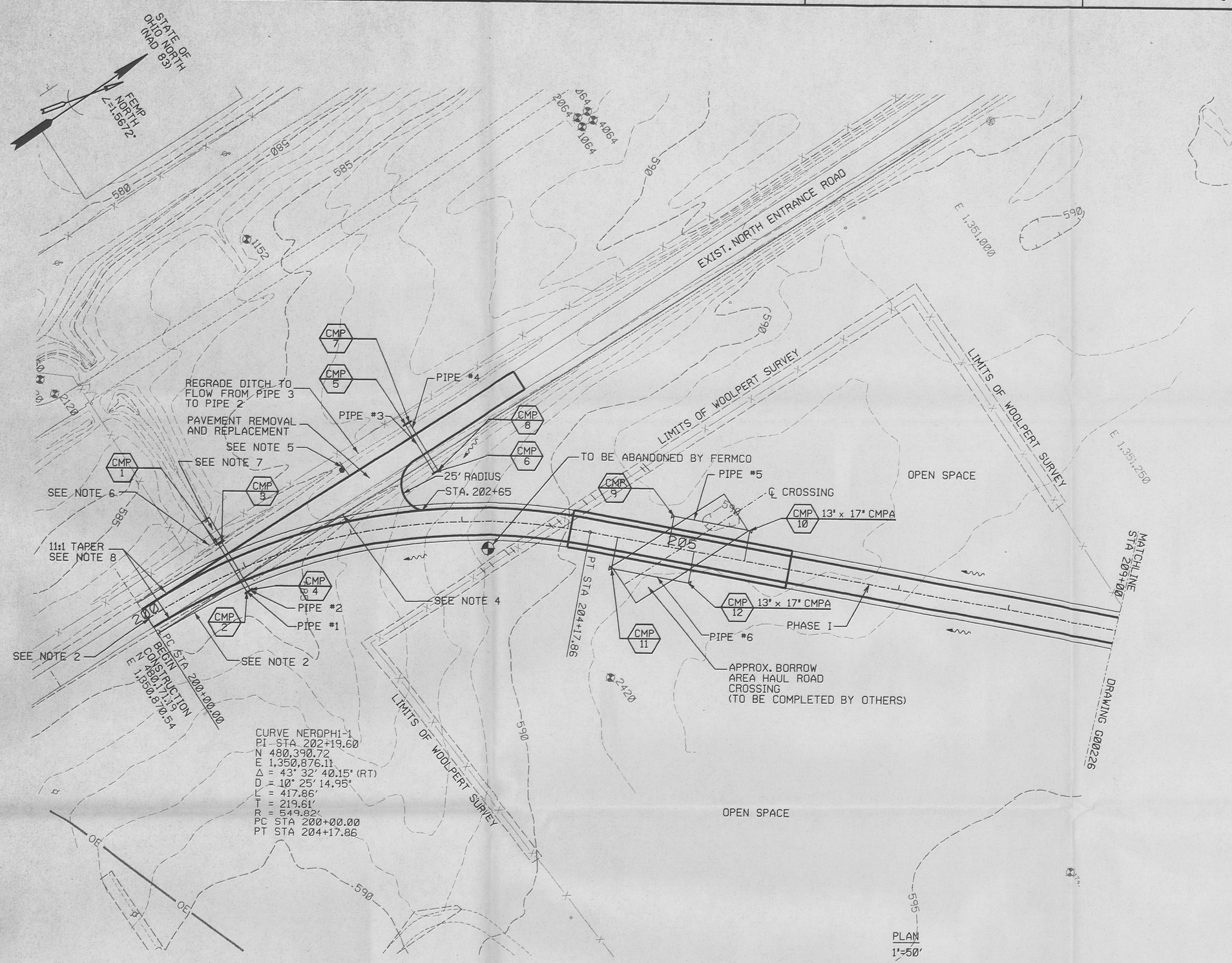
DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 7 OF 7

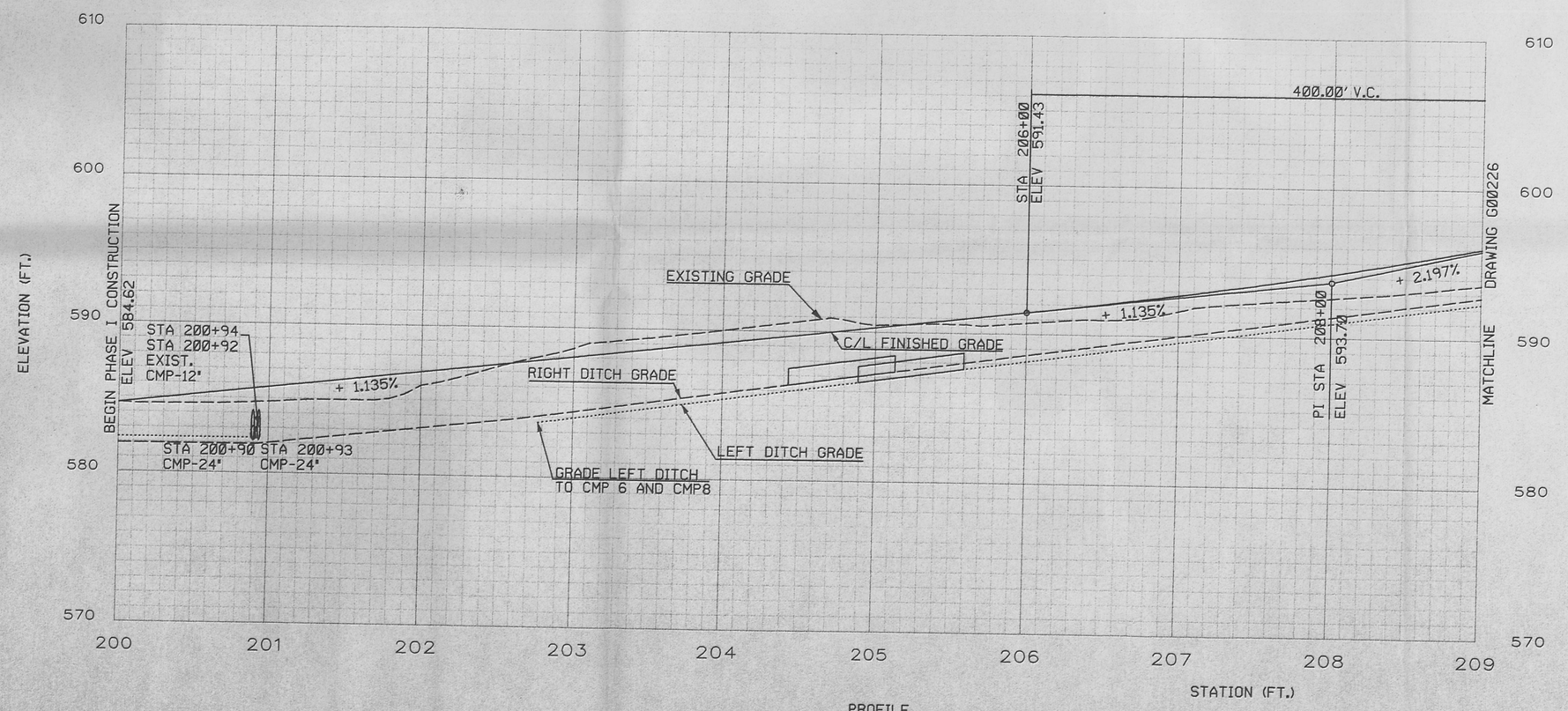
41

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
				AS SHOWN	
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
A-E	DATE 7/25/96		DATE N/A	20120	

STATE OF OHIO JOHN M. UHLER E-046579 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-9870I	92X-5900-G-00226	G0011	0





NOTES

364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. FOR DETAILS OF TIE-IN TO EXISTING NORTH ENTRANCE ROAD, SEE DRAWING 92X-5900-G-00236.
3. SEE DRAWINGS 92X-5900-G-00230 FOR CROSS SECTIONS.
4. THERE ARE EXISTING UNDERGROUND TELEPHONE AND FIBER OPTIC LINES IN THE SHOULDER OF THE EXISTING NORTH ENTRANCE ROAD. THESE LINES ARE VITAL TO THE OPERATION OF THE FEMP. IT IS ESSENTIAL THAT ANY WORK IN THE VICINITY OF THE EXISTING NORTH ENTRANCE ROAD BE COORDINATED WITH FERMCO; AND THESE LINES SHALL BE PROTECTED FROM DAMAGE BY THE SUBCONTRACTOR. SUBCONTRACTOR SHALL SUBMIT A WRITTEN WORK PLAN WHICH DETAILS PROTECTIVE MEASURES AND WORK TO BE PERFORMED PRIOR TO ANY EXCAVATION. FERMCO SHALL VERIFY IN THE FIELD THE ACTUAL LOCATIONS AND ELEVATIONS OF THE LINES, FOR THE SUBCONTRACTOR. ANY EXCAVATION ACTIVITY SHALL BE DONE BY HAND WHEN WITHIN 3 FEET OF ANY KNOWN UTILTIY / PHONE CABLES UNLESS SPECIFICALLY APPROVED BY FERMCO.
5. SEE DRAWINGS 92X-5900-G-00236 FOR TRAFFIC CONTROL DEVICES.
6. REMOVE AND STOCKPILE EXISTING FENCE AS NEEDED TO CONSTRUCT ROAD. COORDINATE WITH FERMCO PRIOR TO PERFORMING WORK
7. REPLACE EXISTING 12' CMP UNDER FENCE WITH CONCRETE CHANNEL. SEE DRAWING 92X-5900-G-00241 FOR DETAIL.
8. SEE DRAWING 92X-5900-G-00240 FOR DETAILS OF CONNECTION TO EXISTING PAVEMENT.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00226	PLAN AND PROFILE - SHEET 7 OF 7
92X-5900-G-00230	CROSS SECTION - SHEET 4 OF 4
92X-5900-G-00231	INTERSECTION DETAILS - SHEET 1 OF 2
92X-5900-G-00236	MAINTENANCE OF TRAFFIC
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2
92X-5900-G-00241	GENERAL DETAILS - SHEET 2 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 6 OF 7

40

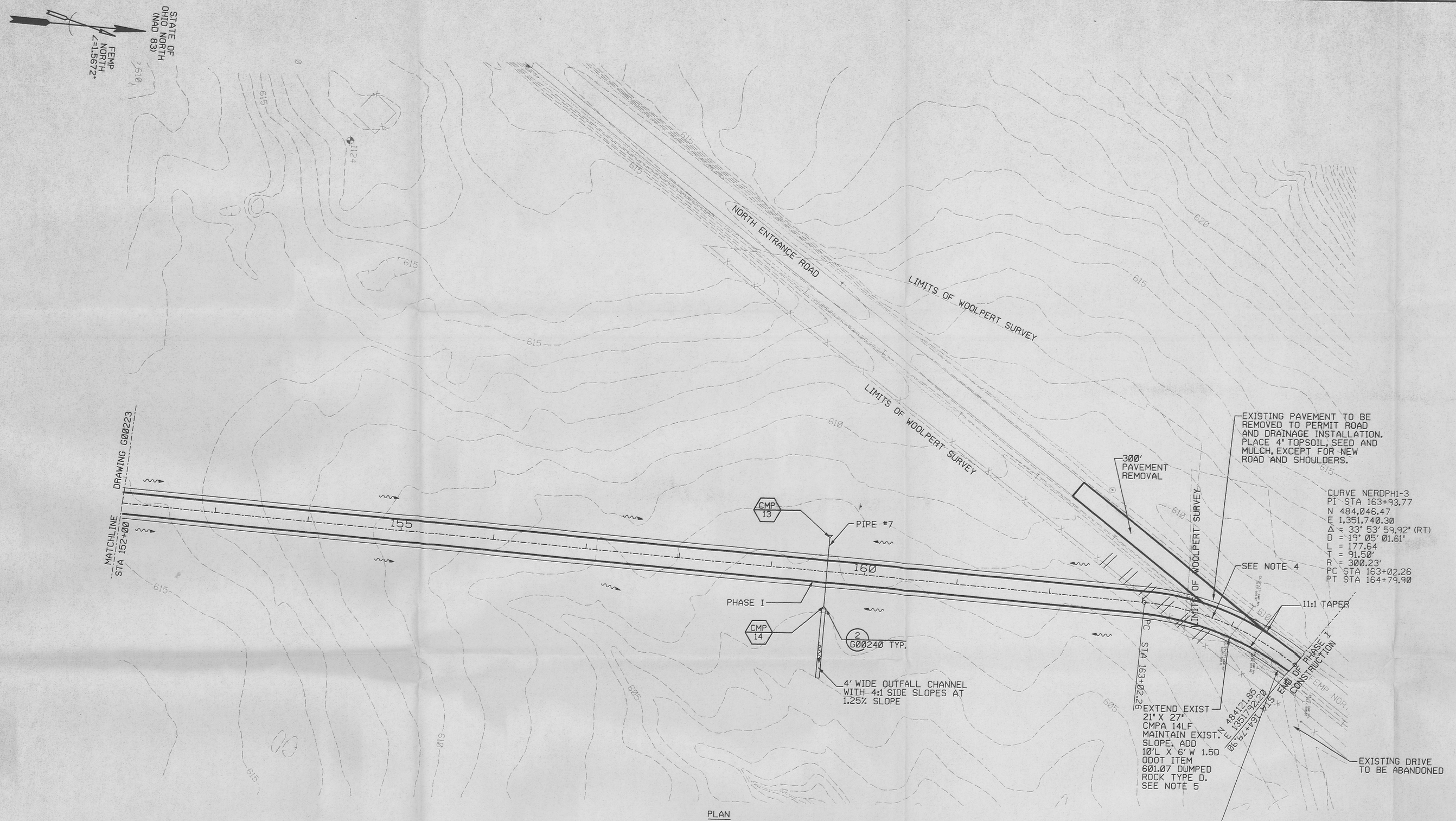
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO. | FLOOR | SCALE: AS SHOWN | CLASS

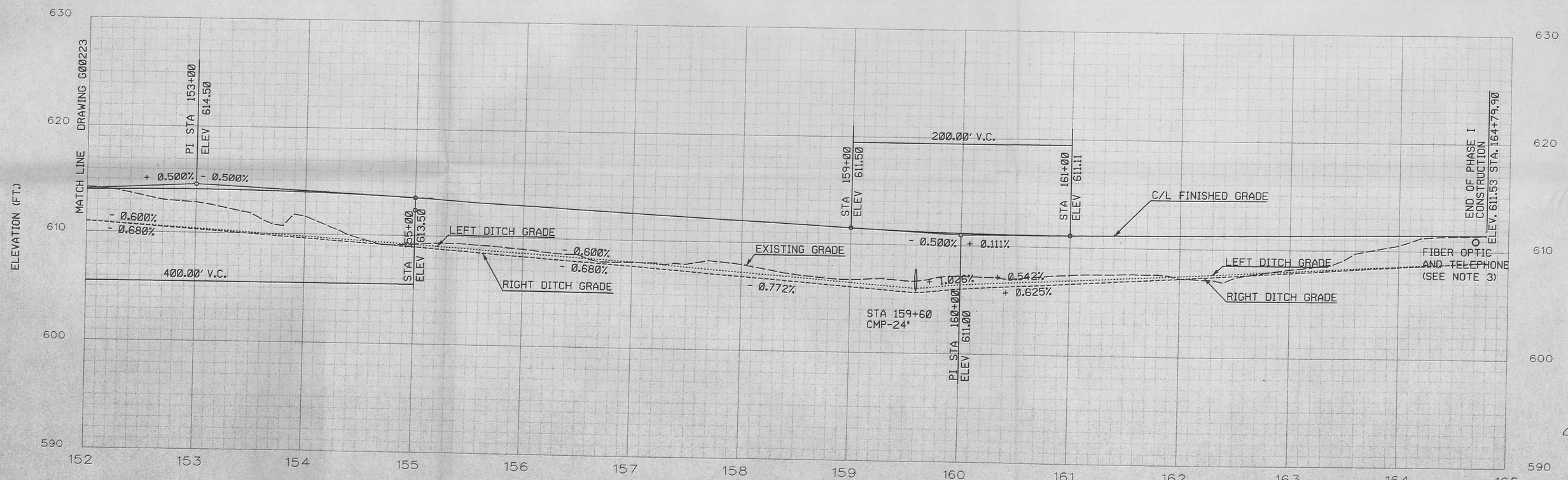
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
0U2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00225	G0010	0

STATE OF OHIO JOHN M. UTTERBACK E-010579 REGISTERED PROFESSIONAL ENGINEER



PLAN
1"=50'



PROFILE
1" = 5'- 0" VERTICAL 1" = 50' - 0" HORIZONTAL

NOTES 364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. SEE DRAWING 92X-5900-G-00229 FOR CROSS SECTIONS.
3. THERE ARE EXISTING UNDERGROUND TELEPHONE AND FIBER OPTIC LINES IN THE SHOULDER OF THE EXISTING NORTH ENTRANCE ROAD. THESE LINES ARE VITAL TO THE OPERATION OF THE FEMP. IT IS ESSENTIAL THAT ANY WORK IN THE VICINITY OF THE EXISTING NORTH ENTRANCE ROAD BE COORDINATED WITH FERMCO; AND THESE LINES SHALL BE PROTECTED FROM DAMAGE BY THE SUBCONTRACTOR. SUBCONTRACTOR SHALL SUBMIT A WRITTEN WORK PLAN WHICH DETAILS PROTECTIVE MEASURES AND WORK TO BE PERFORMED PRIOR TO ANY EXCAVATION. FERMCO SHALL VERIFY IN THE FIELD THE ACTUAL LOCATIONS AND ELEVATIONS OF THE LINES, FOR THE SUBCONTRACTOR. ANY EXCAVATION ACTIVITY SHALL BE DONE BY HAND WHEN WITHIN 3 FEET OF ANY KNOWN UTILITIY / PHONE CABLES UNLESS SPECIFICALLY APPROVED BY FERMCO.
4. SEE DRAWING 92X-5900-G-00240 FOR DETAILS OF CONNECTION TO EXISTING PAVEMENT.
5. EXISTING PIPE DIMENSIONS FROM FEMP INFORMATION. SUBCONTRACTOR TO FIELD VERIFY AND USE CLOSEST STANDARD SIZE (SUCH AS 28"X20" CMPA).

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-G-00229	CROSS SECTIONS - SHEET 3 OF 4
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
		INITIALS AND DATE		
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

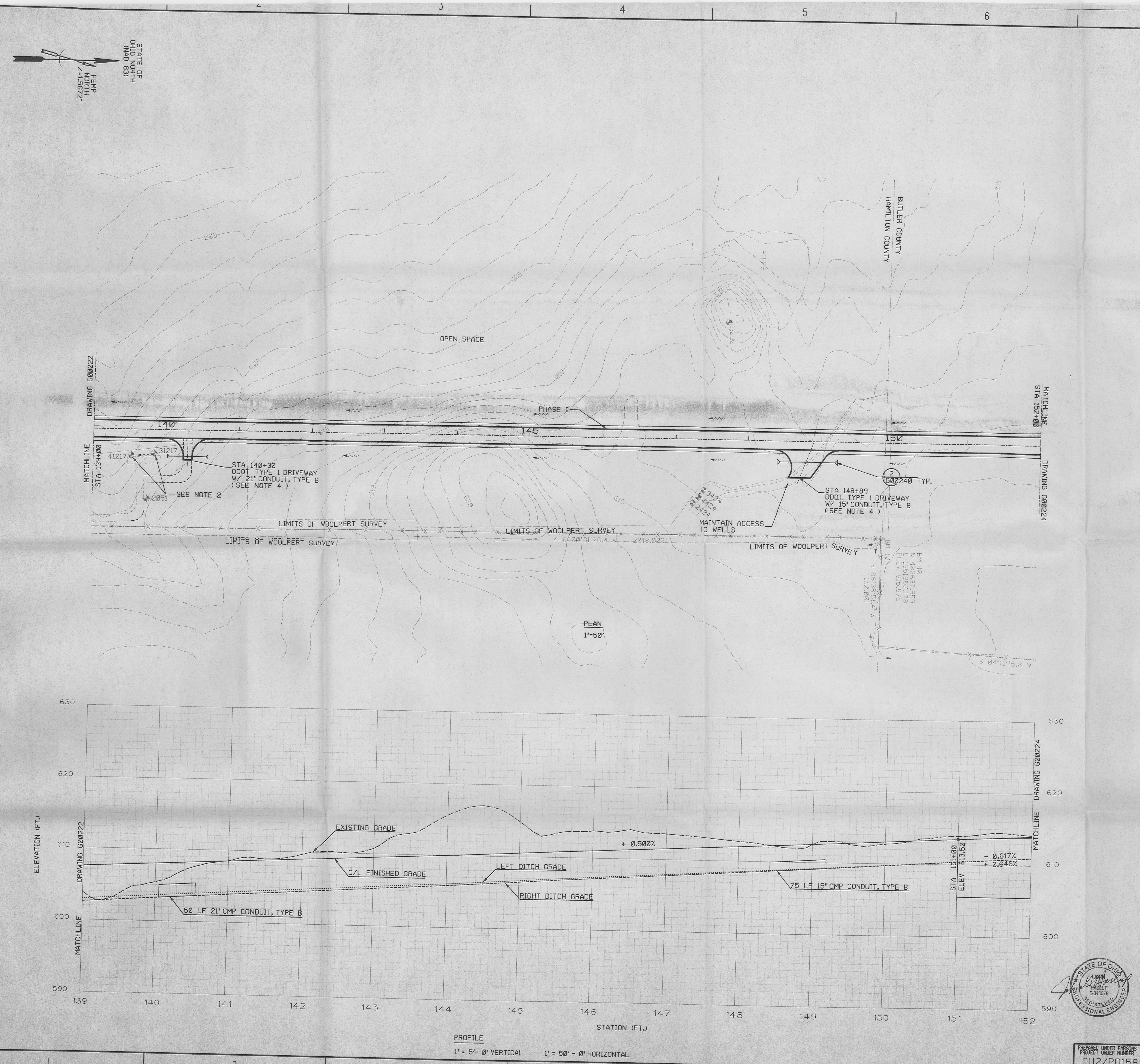
PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 5 OF 7 39

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: AS SHOWN	CLASS
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
A-E 7/25/96 DATE		N/A DATE		20120	

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00224	G0009	0

364



NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. EXISTING MONITORING WELLS SHALL BE PROTECTED. ROUTE DITCH EAST OF WELLS NOS. 41217 AND 31217.
3. SEE DRAWINGS 92X-5900-G-00228 AND 92X-5900-G-00229 FOR CROSS SECTIONS.
4. THE ODOT TYPE I DRIVEWAYS WILL BE PLACED IN ACCORDANCE WITH ODOT STANDARD DRAWING BP-41. THE PAVEMENT SECTION WILL BE 1 1/2" 404 ASPHALT CONCRETE, 6" 301 BITUMINOUS AGGREGATE, AND 3" 304 AGGREGATE BASE. THE DRIVEWAY SHALL BE CONSTRUCTED TO MEET THE EXISTING GRAVEL ROAD.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00222	PLAN AND PROFILE - SHEET 3 OF 7
92X-5900-G-00224	PLAN AND PROFILE - SHEET 5 OF 7
92X-5900-G-00228	CROSS SECTIONS - SHEET 2 OF 4
92X-5900-G-00229	CROSS SECTIONS - SHEET 3 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

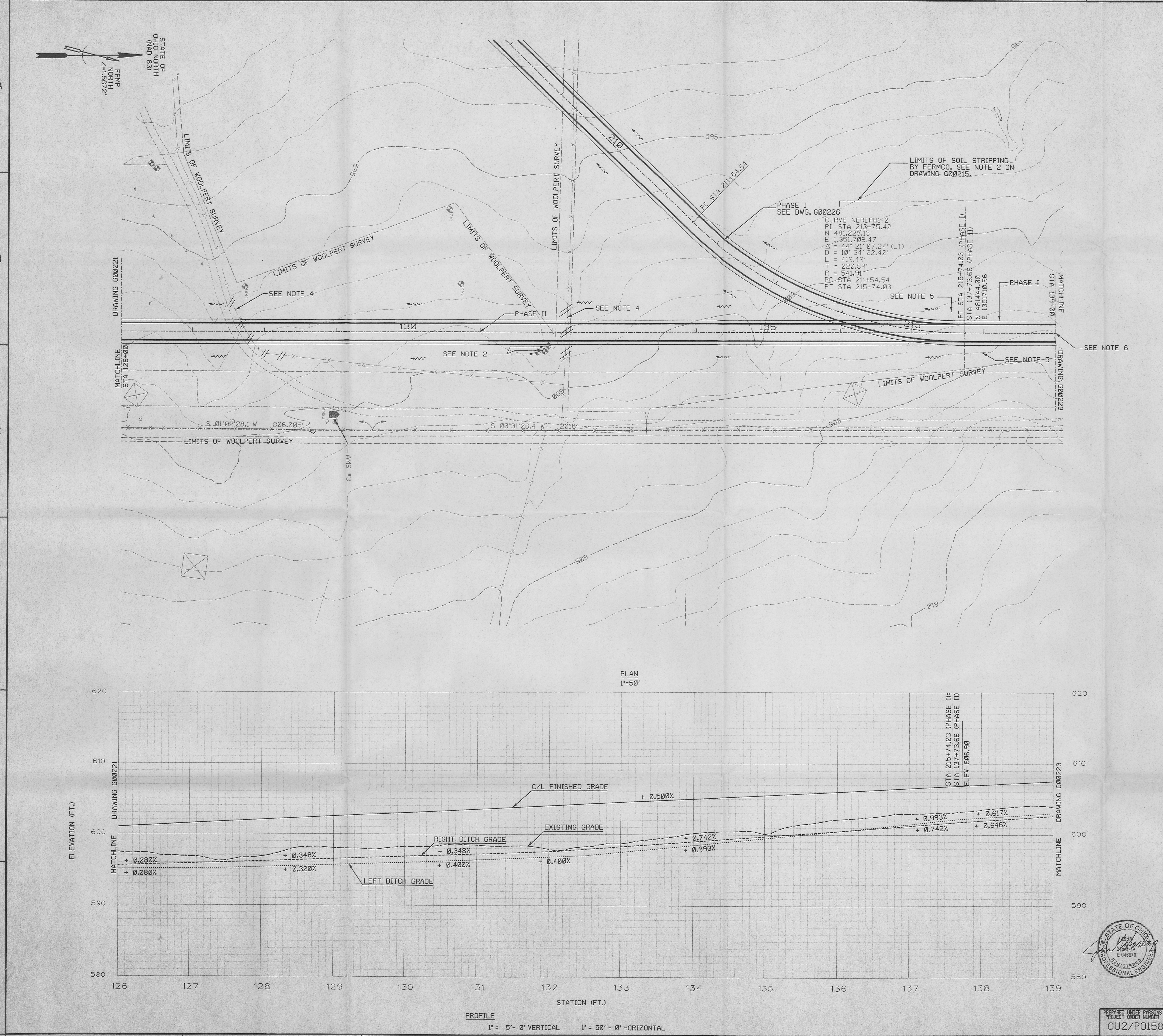
DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 4 OF 7

38

DRAWN BY M. BESS — DATE 12/18/95 — LEAD ENGINEER [signature] 7/22/96 — CHECKED BY A. CHRISTO — DATE 12/18/95
PLANT/BLDG. NO. — FLOOR — SCALE AS SHOWN — CLASS
SUBMITTED FOR APPROVAL [signature] DATE 7/25/96 — FERMCO CRU APPROVAL N/A DATE — FERMCO PROJECT NUMBER 20120
DOE PROJECT NO. — FEMP PROJECT NO. WBS 1.1.1.1.2.3.6 00-90701 — DRAWING INDEX CODE NO. 92X-5900-G-00223 — SHEET NO. G0008 — REV. NO. 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER — E-048578



NOTES

364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. EXISTING MONITORING WELLS SHALL BE ABANDONED BY FERMCO.
3. SEE DRAWINGS 92X-5900-G-00227 AND 92X-5900-G-00228 FOR CROSS SECTIONS.
4. REMOVE AND STOCKPILE EXISTING FENCE AS NEEDED TO CONSTRUCT ROAD. COORDINATE WITH FERMCO PRIOR TO PERFORMING WORK.
5. TRANSITION FROM 4:1 SIDE SLOPES IN PHASE I TO 3:1 SIDE SLOPES IN PHASE II WITHIN 50' OF TIE-IN LOCATION.
6. AT THE START OF THE PHASE II CONSTRUCTION, THE EXISTING PHASE I PAVEMENT SHALL BE REMOVED UP TO STA. 139+00. THE EXISTING GROUND SHALL REFLECT THE PHASE I AS BUILT CONDITIONS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00215	SITE PLAN
92X-5900-G-00221	PLAN AND PROFILE - SHEET 2 OF 7
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-6-00226	PLAN AND PROFILE - SHEET 7 OF 7
92X-5900-G-00227	CROSS SECTIONS - SHEET 1 OF 4
92X-5900-G-00228	CROSS SECTIONS - SHEET 2 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96
		INITIALS AND DATE		

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

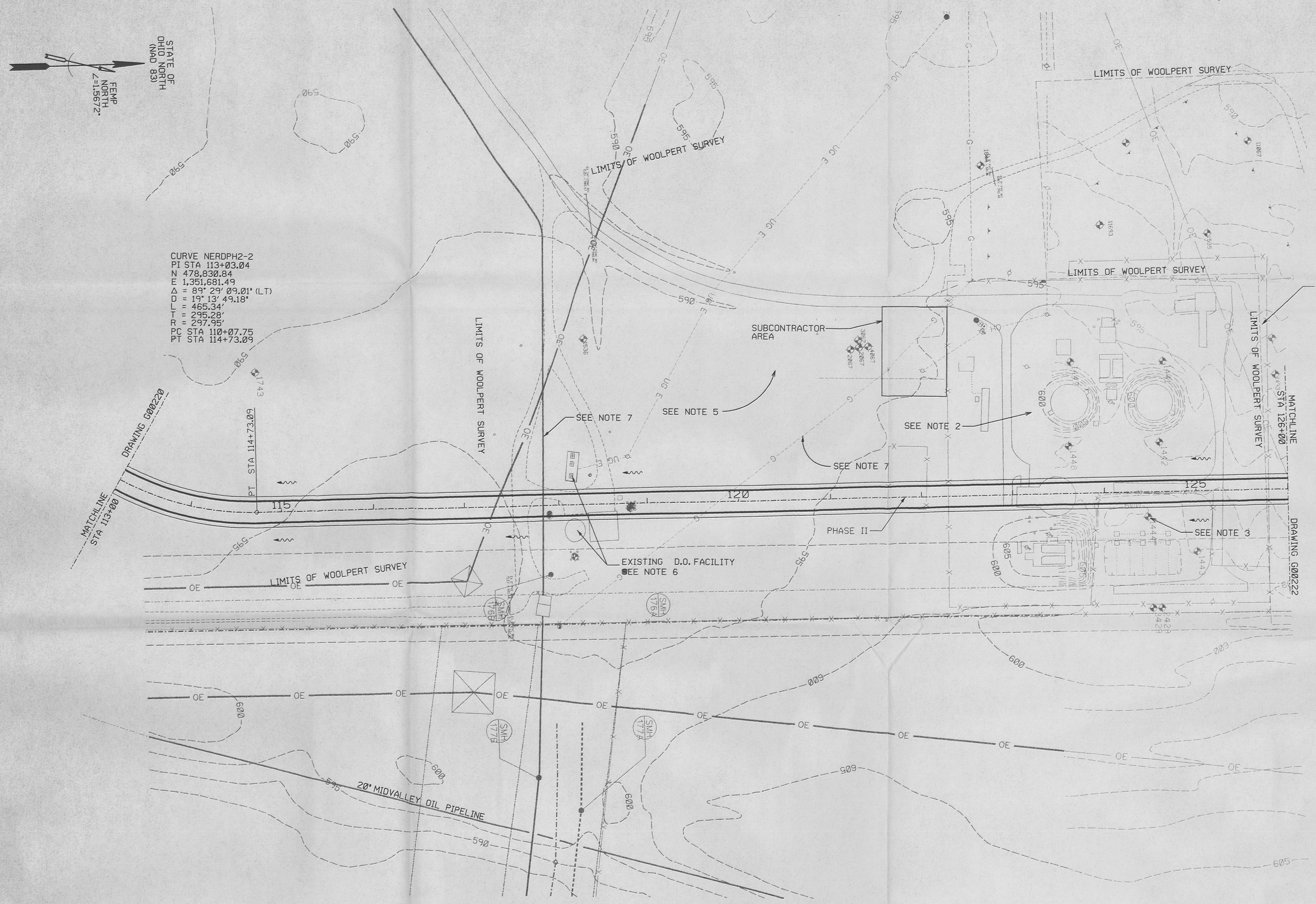
DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 3 OF 7

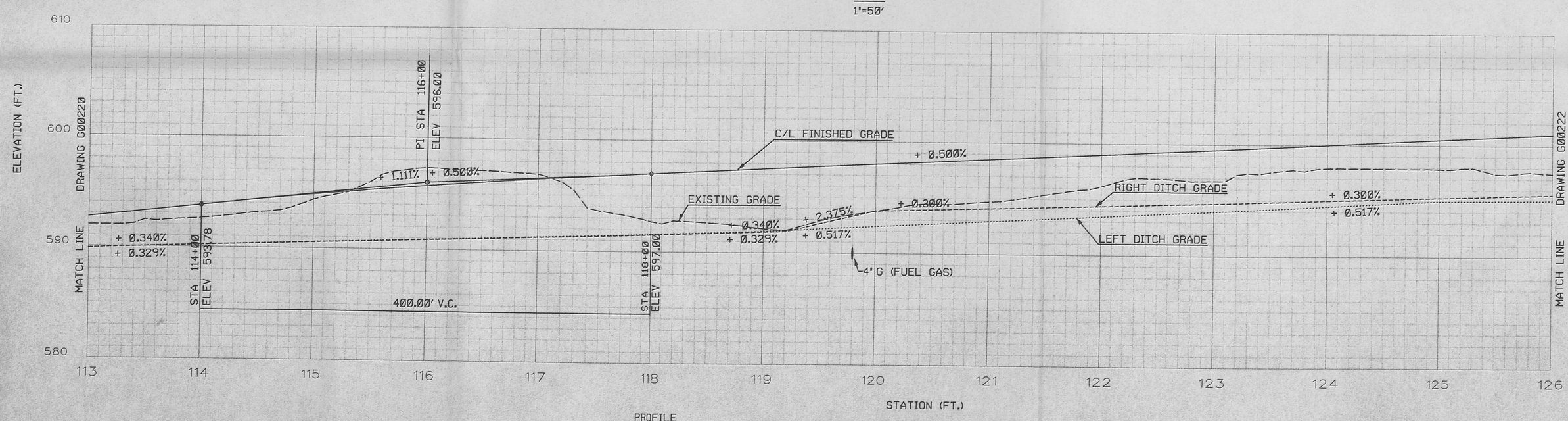
37

STATE OF OHIO · REGISTERED PROFESSIONAL ENGINEER · E-048570

DRAWN BY: M. BESS DATE: 12/18/95
LEAD ENGINEER: [signature] DATE: 7/23/96
CHECKED BY: A. CHRISTO DATE: 12/18/95
PLANT/BLDG. NO.
FLOOR
SCALE: AS SHOWN
CLASS
SUBMITTED FOR APPROVAL: A-E [signature] DATE 7/25/96
FERMCO CRU APPROVAL: N/A DATE
FERMCO PROJECT NUMBER: 20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158
DOE PROJECT NO.
FEMP PROJECT NO.: WBS 1.1.1.1.2.3.6 00-90701
DRAWING INDEX CODE NO.: 92X-5900-G-00222
SHEET NO.: G0007
REV. NO.: 0





NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. EXISTING SEWAGE TREATMENT PLANT FACILITIES TO BE REMOVED (BY OTHERS) PRIOR TO STARTING PHASE II.
3. EXISTING MONITORING WELL SHALL BE ABANDONED BY FERMCO.
4. SEE DRAWING 92X-5900-G-00227 FOR CROSS SECTIONS.
5. PROPOSED GRADING IN THESE AREAS BY OTHERS. THE ON-SITE DISPOSAL FACILITY (OSDF) IN THIS DESIGN PHASE NOT SHOWN. TRANSITION OF GRADING BETWEEN AREAS TO BE COORDINATED THROUGH FERMCO.
6. COORDINATION OF THE REMOVAL AND/OR RELOCATION OF THE D.O. FACILITIES SHALL BE DONE BY FERMCO PRIOR TO PHASE II CONSTRUCTION.
7. THE RELOCATION OF THE GW1-24" LINE AND THE 4" FG SHALL BE DONE BY FERMCO PRIOR TO PHASE II CONSTRUCTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00222	PLAN AND PROFILE - SHEET 3 OF 7
92X-5900-G-00227	CROSS SECTIONS - SHEET 1 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
			INITIALS AND DATE	
Ø	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/PO158

STATE OF OHIO — JOSEPH M. SLUP — E-56579 — REGISTERED PROFESSIONAL ENGINEER

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 2 OF 7

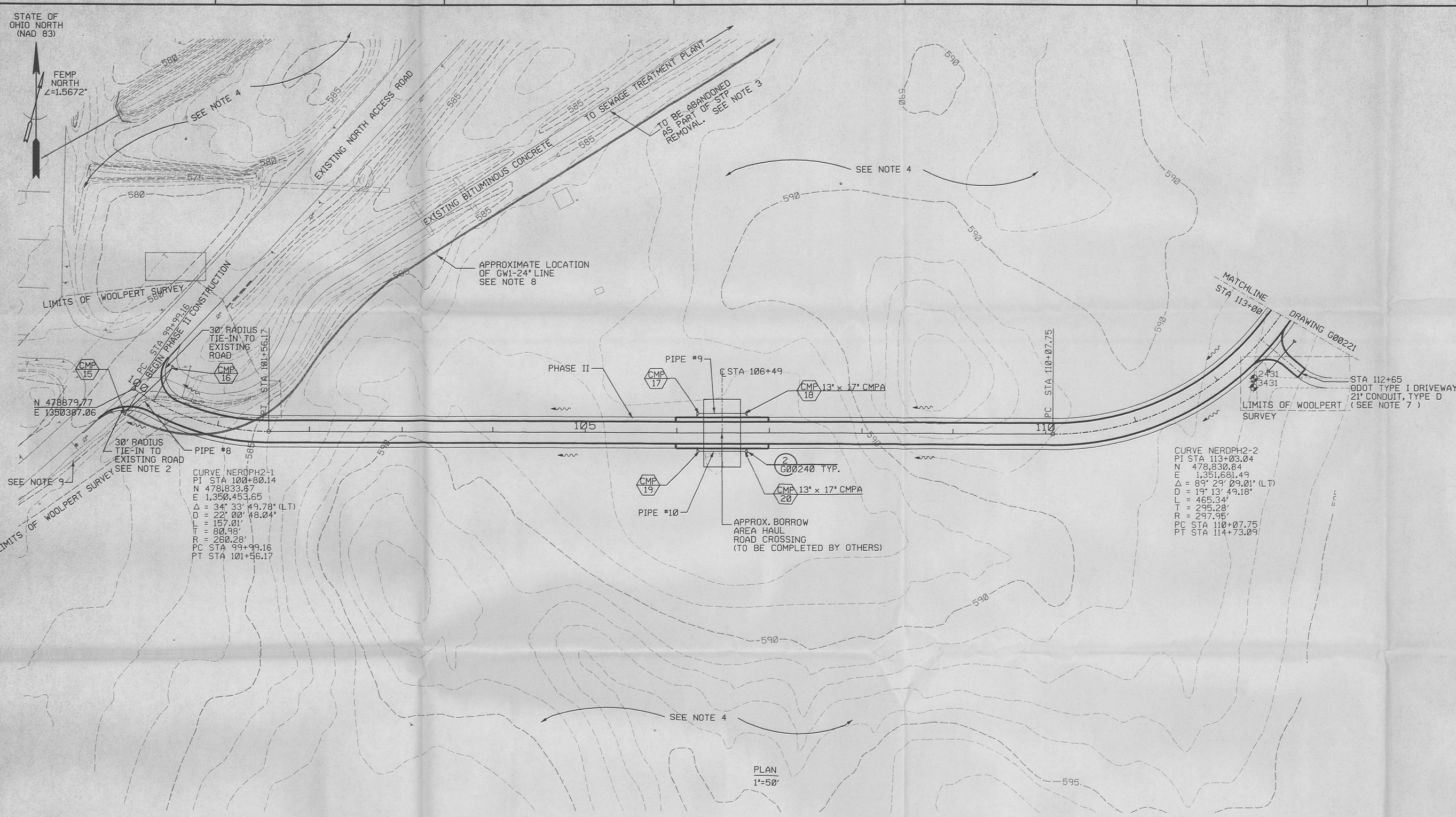
36

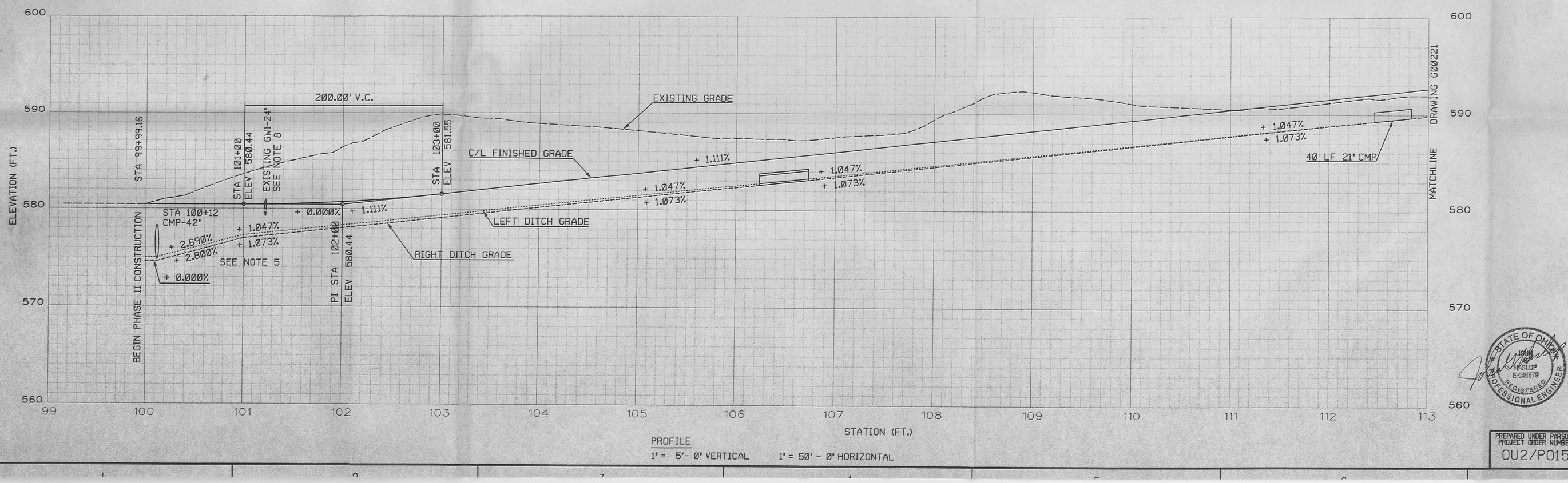
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		AS SHOWN	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00221	G0006	Ø





NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. SEE DRAWING 92X-5900-G-00227 FOR CROSS SECTIONS FOR GRADING AND DRAINAGE.
3. THE EXISTING SEWAGE TREATMENT PLANT (STP) ROAD SHALL BE REMOVED PRIOR TO PHASE II (BY OTHERS).
4. PROPOSED GRADING IN THESE AREAS BY OTHERS. THE ON-SITE DISPOSAL FACILITY (OSDF) IN THIS DESIGN PHASE IS NOT SHOWN. TRANSITION OF GRADING BETWEEN AREAS TO BE COORDINATED THROUGH FERMCO.
5. FOR INFORMATION ON LOCATION AND ELEVATION OF STORM DRAINS, SEE DRAWING 92X-5900-G-00242.
6. WELLS ARE TO REMAIN. SUBCONTRACTOR SHALL PROTECT WELLS FROM DAMAGE DURING CONSTRUCTION. MODIFY SLOPE AND DITCH TO AVOID WELLS.
7. THE ODOT TYPE I DRIVEWAY WILL BE PLACED IN ACCORDANCE WITH ODOT STANDARD DRAWING BP-4.1. THE PAVEMENT SECTION WILL BE 1½' 404 ASPHALT CONCRETE, 6' 301 BITUMINOUS AGGREGATE BASE AND 3' 304 AGGREGATE BASE. THE DRIVEWAY SHALL BE CONSTRUCTED TO MEET THE EXISTING GRAVEL ACCESS ROAD.
8. THE RELOCATION OF THE GW1-24" LINE SHALL BE DONE BY FERMCO PRIOR TO PHASE II CONSTRUCTION.
9. AN OUTFALL CHANNEL IS REQUIRED FOR THE PROPOSED PIPE. THIS OUTFALL IS TO BE ESTABLISHED IN THE FIELD TO MATCH THE CONDITIONS AT THE START OF PHASE II CONSTRUCTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00221	PLAN AND PROFILE - SHEET 2 OF 7
92X-5900-G-00227	CROSS SECTIONS - SHEET 1 OF 4
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2
92X-5900-G-00242	DRAINAGE SUBSUMMARY

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 1 OF 7

35

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

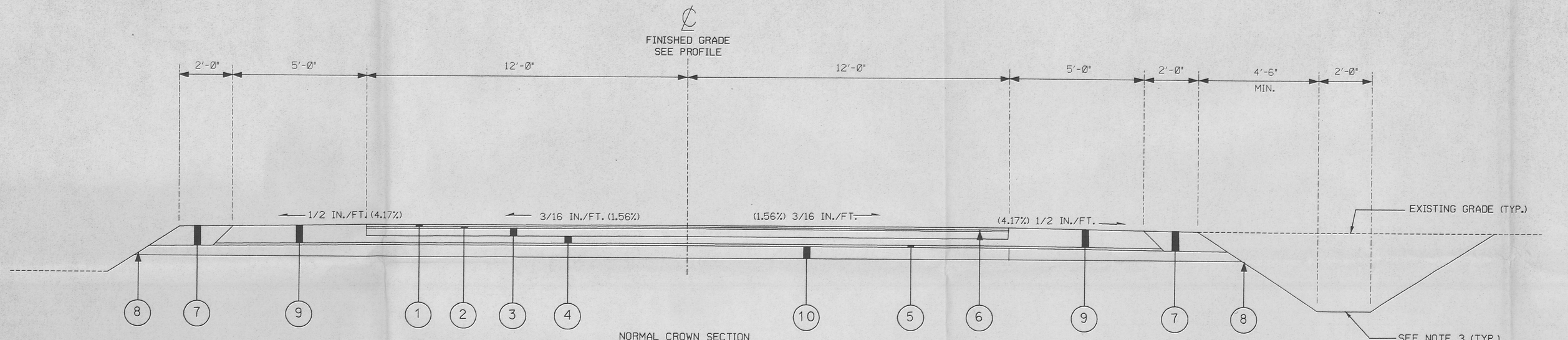
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		AS SHOWN	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00220	G0005	0

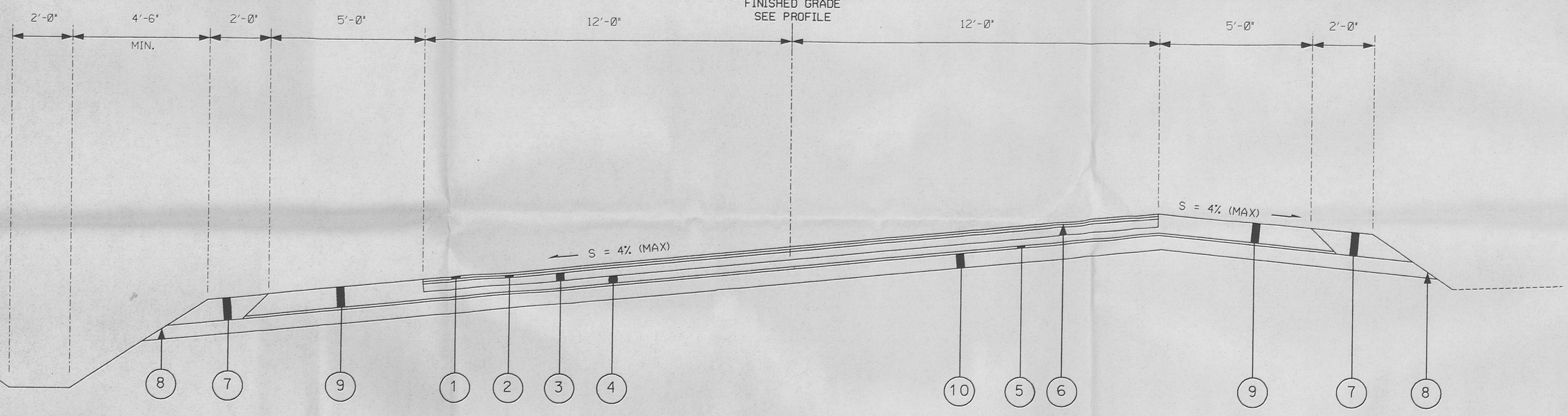
PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

STATE OF OHIO JOHN M. MCCLUP E-046579 REGISTERED PROFESSIONAL ENGINEER



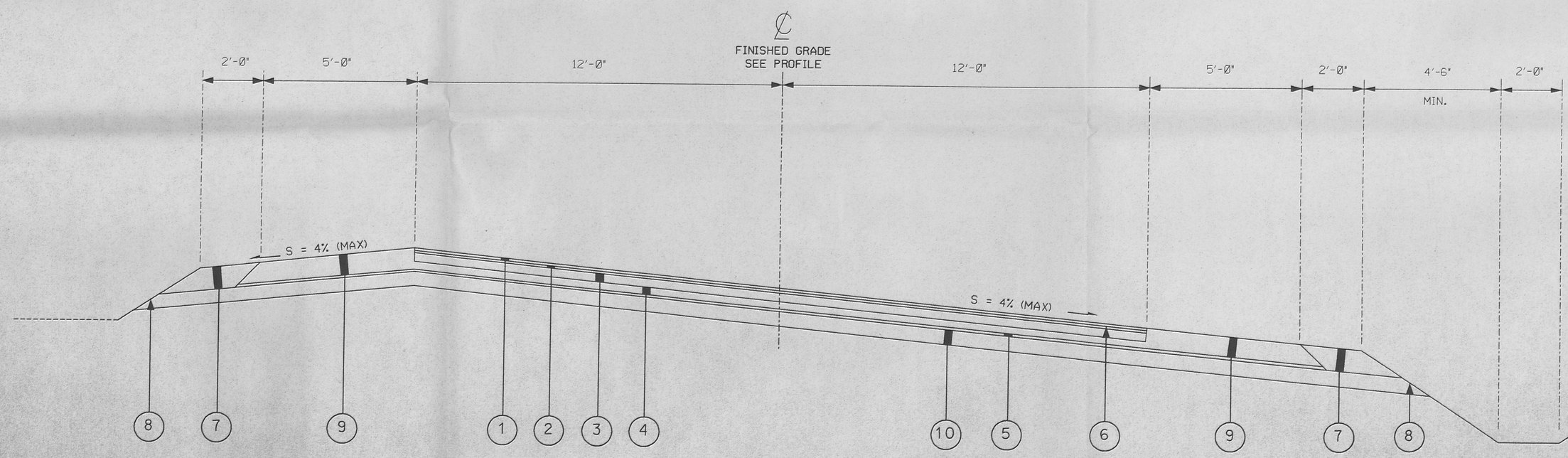
NORMAL CROWN SECTION

STA. 102+94 TO 108+92 STA. 205+36 TO 210+36
STA. 115+89 TO 161+50



SUPERELEVATED SECTION - LEFT

STA. 99+99 TO 102+94 STA. 210+36 TO 138+92
STA. 108+92 TO 115+89



SUPERELEVATED SECTION - RIGHT

STA. 161+50 TO 164+79.92
STA. 200+00 TO 205+36

NOTES

1. TRANSITION FROM EXISTING PAVEMENT TO NEW CROSS SECTIONS ON DRAWING 92X-5900-G-00220 ARE IDENTIFIED ON PLAN AND PROFILE SHEETS AND THE SUPERELEVATION TABLES.
2. SEE DRAWING 92X-5900-G-00235 FOR SUPERELEVATION TABLES. STATIONS SHOWN FOR SUPERELEVATED SECTIONS INCLUDE TRANSITIONS. THE SUPERELEVATION TRANSITION IS DEVELOPED BY ROTATING THE PAVEMENT ABOUT THE CENTERLINE.
3. SEE PLAN AND PROFILE AND CROSS SECTION SHEETS FOR DETAILS OF GRADING AND DRAINAGE.
4. FROM STA 204+00 TO 206+00 (PH I) AND STA 106+00 TO 107+00 (PH II) SHOULDER TO BE THE SAME DEPTH AS THE TRAVELED LANES TO ALLOW FOR THE BORROW AREA HAUL ROAD CROSSING.
5. MINIMUM DITCH DEPTH OF 1.5' IS REQUIRED. ON THE WEST SIDE OF ROAD, A BERM MAY BE REQUIRED ON THE BACK SLOPE TO PROVIDE THE MINIMUM DEPTH. TOP WIDTH OF BERM TO BE 10' WITH 3:1 SIDE SLOPE.

LEGEND

1. 1-1/2" ASPHALT CONCRETE (AC-20) SURFACE COURSE (ODOT ITEM 404)
2. 1-1/2 " ASPHALT CONCRETE (AC-20) COURSE (ODOT ITEM 402)
3. 7" BITUMINOUS AGGREGATE BASE (ODOT ITEM 301)
4. 6" AGGREGATE BASE (ODOT ITEM 304)
5. NON WOVEN GEOTEXTILE (ODOT 712.09 TYPE D)
6. BITUMINOUS PRIME COAT (ODOT ITEM 408)
7. EMBANKMENT (ODOT ITEM 203)
8. SEEDING AND MULCHING (ODOT ITEM 659)
9. AGGREGATE SHOULDER (ODOT ITEM 304) SEE NOTE 4.
10. SUBGRADE COMPACTION 12" (ODOT ITEM 203)

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00235	SUPERELEVATION TABLES

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TYPICAL SECTIONS 34

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE 1' = 2'H 1'=4V	CLASS
SUBMITTED FOR APPROVAL A-E 7/25/96 DATE		FERMCO CRU APPROVAL N/A DATE		FERMCO PROJECT NUMBER 20120	
DOE PROJECT NO.	FEMP PROJECT NO. WBS 1.1.1.1.2.3.6 00-9870I	DRAWING INDEX CODE NO. 92X-5900-G-00219		SHEET NO. G0004	REV. NO. 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158

STATE OF OHIO — E-047570 — REGISTERED PROFESSIONAL ENGINEER

ODOT ITEM	ODOT ITEM EXT.	DESCRIPTION	UNIT	BID QUANTITY	
				PHASE I	PHASE II
201	11000	CLEARING AND GRUBBING	L SUM	1	1
202	23000	PAVEMENT REMOVED	SQ YD	1556	0
203	12000	EXCAVATION NOT INCLUDING EMBANKMENT	CU YD	14,350	20,006
203	20000	EMBANKMENT	CU YD	11,383	11,642
203	50000	SUBGRADE COMPACTION	SQ YD	12,134	10,065
207	30000	FILTER FABRIC FENCE	LIN FT	4255	3450
207	70000	STRAW OR HAY BALES	EACH	80	40
301	12000	BITUMINOUS AGGREGATE BASE, AC-10	CU YD	2166	1804
304	20000	AGGREGATE BASE	CU YD	4121	3533
402	20000	ASPHALT,CONCRETE,AC-20	CU YD	529	447
404	20000	ASPHALT,CONCRETE,AC-20	CU YD	509	460
408	10000	BITUMINOUS PRIME COAT	GAL	6500	5408
601	28000	DUMPED ROCK FILL, TYPE D	CU YD	20	20
601	34300	ROCK CHANNEL PROTECTION, TYPE D	CU YD	0	109
602	20000	CONCRETE MASONRY	CU YD	5	0
603	05900	15"CONDUIT,TYPE B	LIN FT	70	0
603	08900	21"CONDUIT,TYPE B	LIN FT	50	40
603	10400	24"CONDUIT,TYPE B	LIN FT	175	0
603	16400	30"CONDUIT,TYPE B	LIN FT	100	0
603	19400	42"CONDUIT,TYPE B	LIN FT	0	70
603	57000	17" x 13" CONDUIT, TYPE D	LIN FT	140	100
614	11000	MAINTAINING TRAFFIC	L SUM	1	1
630	03100	GROUND MOUNTED SUPPORT, NO. 3 POST	LIN FT	120	80
630	80102	SIGN, FLAT SHEET, TYPE G	SQ FT	105	63
644	00100	EDGE LINE	MILE	0.81	0.74
644	00300	CENTER LINE	MILE	0.81	0.74
644	00400	CHANNELING LINE	LIN FT	245	0
644	00500	STOP LINE	LIN FT	30	20
644	00700	TRANSVERSE LINE	LIN FT	75	0
651	10000	TOPSOIL STOCKPILED	CU YD	4760	4220
652	10000	PLACING STOCKPILED TOPSOIL	CU YD	2310	2040
659	10000	SEEDING AND MULCHING	SQ YD	20,800	18,400
*	*	DUST CONTROL	L SUM	1	1
*	*	NON-WOVEN GEOTEXTILE - TYPE D	SQ YD	11,414	10,402
*	*	12" FLARED END SECTION	EACH	0	2
*	*	15" FLARED END SECTION	EACH	2	0
*	*	21" FLARED END SECTION	EACH	2	2
*	*	24" FLARED END SECTION	EACH	2	0
*	*	42" FLARED END SECTION	EACH	0	2
*	*	17" x 13" FLARED END SECTION	EACH	4	4

NOTES

1. ITEMS INDICATED BY "*" ARE NOT STANDARD ODOT ITEMS AND ARE DETAILED IN THE PLAN DRAWINGS.

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00224	PLAN AND PROFILE - SHEET 5 OF 7

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
GENERAL SUMMARY

33

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL A-E DATE 7/25/96		FERMCO CRU APPROVAL N/A DATE		FERMCO PROJECT NUMBER 20120	
DOE PROJECT NO.	FEMP PROJECT NO. WBS 1.1.1.1.2.3.6 00-90701	DRAWING INDEX CODE NO. 92X-5900-G-00217		SHEET NO. G0003	REV. NO. 0

STATE OF OHIO JOHN M. PHILLIPS E-046579 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER OU2/P0158

1. UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM FERMCO AS REQUIRED BY SECTION 153.64 O.R.C. THE LOCATIONS AND DEPTHS SHALL BE FIELD VERIFIED BY FERMCO PRIOR TO EXCAVATION. COORDINATE ALL UTILTIY WORK WITH FERMCO.

2. ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM, (NGVD OF 29 AND NAD 83 FOR COORDINATES). SURVEY CONTROL POINTS ARE SHOWN. SUBCONTRACTOR SHALL PROTECT SURVEY CONTROL POINTS FROM DAMAGE UNLESS THEY ARE IN THE FOOT PRINT OF THE ROAD.

3. WORK LIMITS

THE WORK LIMITS SHALL BE DETERMINED BY FERMCO. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE SUBCONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS, SUBJECT TO FERMCO APPROVAL.

4. MAINTENANCE OF TRAFFIC

NOTICE OF CLOSURE SIGNS, AND BARRICADES AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE SUBCONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS OR ROADS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. ALL WORK AND MATERIAL SHALL CONFORM WITH ODOT STANDARDS

5. DUST CONTROL

SEE SUBPART 6 OF BID DOCUMENT FOR REQUIREMENTS.

6. ODOT ITEM 659, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS DISTURBED BY THE SUBCONTRACTOR. ALL COMMERCIAL FERTILIZER APPLICATION SHALL BE INCLUDED AS PART OF SEEDING AND MULCHING AND SHALL NOT BE PAID FOR SEPARATELY. SEE MIXTURE (BY WEIGHT)

40% KENTUCKY BLUE GRASS (POA PRATENSIS)
40% CREEPING RED FESCUE (FESTUCCA RUBRA)
20% ANNUAL RYEGRASS (LOLIUM MULTIFLORUM)

7. EXCESS EXCAVATION AND TOP SOIL IS TO BE STRIPPED SEPARATELY AND STOCKPILED SEPARATELY. SOIL SHALL BE HAULED TO ON-SITE STOCKPILE LOCATIONS DESIGNATED BY FERMCO AND DISPOSED OF IN ACCORDANCE WITH STATEMENT OF WORK SUBPART 6 OF THE FERMCO CONTRACT DOCUMENT.

8. THE SUBCONTRACTOR SHALL VERIFY EXISTING GROUND ELEVATIONS IN THE AREA STRIPPED BY FERMCO. AND NOTIFY FERMCO OF ANY DEVIATIONS PRIOR TO ANY EARTHWORK. SEE DRAWING G00215 FOR LOCATIONS.

9. EARTHWORK

- PER ODOT ITEM 203
- STRIP TOPSOIL AND STOCKPILE SEPARATELY FOR REUSE. EXCESS DISPOSED OF PER FERMCO APPROVAL.
- ALL DEBRIS, WASTE, AND EXCESS SOIL TO BE HANDLED IN ACCORDANCE WITH STATEMENT OF WORK SUBPART 6 OF THE FERMCO CONTRACT DOCMENT.
- COMPACT ALL FILL MATERIAL TO 95% STANDARD PROCTOR PER ASTM D698. MATERIAL IS TO BE WITHIN 3% OF OPTIMUM MOISTURE.
- PROOFROLL SUBGRADE OF ROAD AREA FOR SOFT SPOTS PER ODOT ITEM 203.14. PROOF ROLLING SHALL BE INCLUDED IN THE COST OF SUBGRADE COMPACTION
- TESTING FREQUENCIES AND FIELD TESTING METHODS ARE SPECIFIED IN THE BID DOCUMENT.

10. MONITORING WELLS TO BE ABANDONED BY FERMCO, UNLESS OTHERWISE NOTED.

NOTES

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD
CONSTRUCTION

DRAWING TITLE
CIVIL
GENERAL NOTES

32

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/24/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

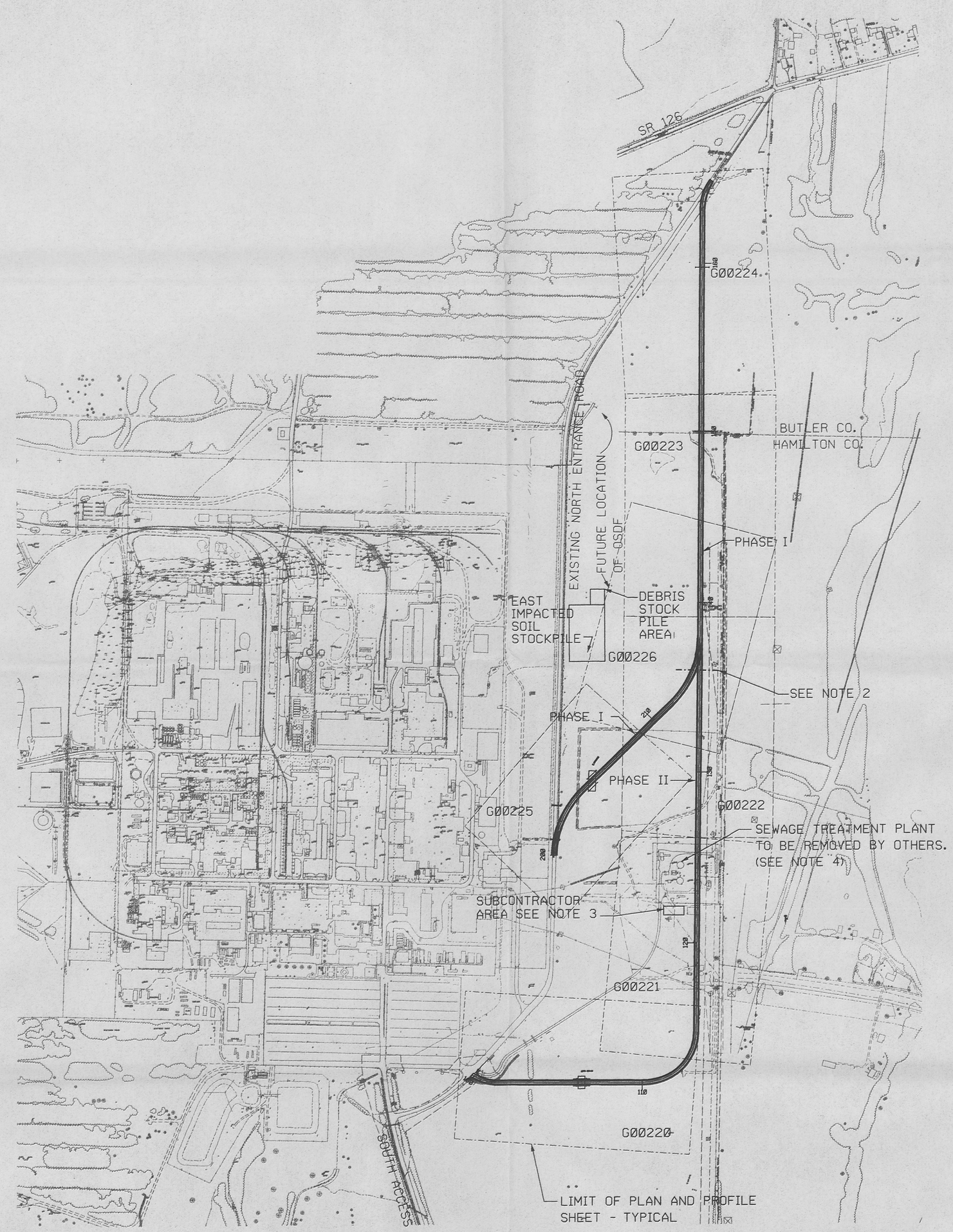
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20120

JOHNNY M. UTLEY E-040379 REGISTERED PROFESSIONAL ENGINEER STATE OF OHIO

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
0U2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00216	G0002	Ø

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°



NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW. 364
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95 AND 5/96.
2. THE AREA NORTH OF THIS LINE SHALL BE STRIPPED 6 INCHES BY FERMCO PRIOR TO THE START OF CONSTRUCTION. THE WORK AREA SOUTH OF THIS LINE SHALL BE STRIPPED 6 INCHES BY THE SUBCONTRACTOR. SUBCONTRACTOR TO STOCKPILE THIS POTENTIALLY CONTAMINATED SOIL IN AN ON-SITE LOCATION DESIGNATED BY FERMCO IN ACCORDANCE WITH SUBPART 6 OF THE FERMCO CONTRACT DOCUMENT.
3. AREA RESERVED FOR SUBCONTRACTORS USE FOR LAYDOWN AND OFFICE TRAILER.
4. ALIGNMENT FOR PHASE II MAY BE MODIFIED IN THIS AREA AFTER SEWAGE TREATMENT PLANT REMOVAL TO ACCOUNT FOR EXISTING CONDITIONS AT THAT TIME.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00221	PLAN AND PROFILE - SHEET 2 OF 7
92X-5900-G-00222	PLAN AND PROFILE - SHEET 3 OF 7
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-G-00224	PLAN AND PROFILE - SHEET 5 OF 7
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00226	PLAN AND PROFILE - SHEET 7 OF 7

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL SITE PLAN 31

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

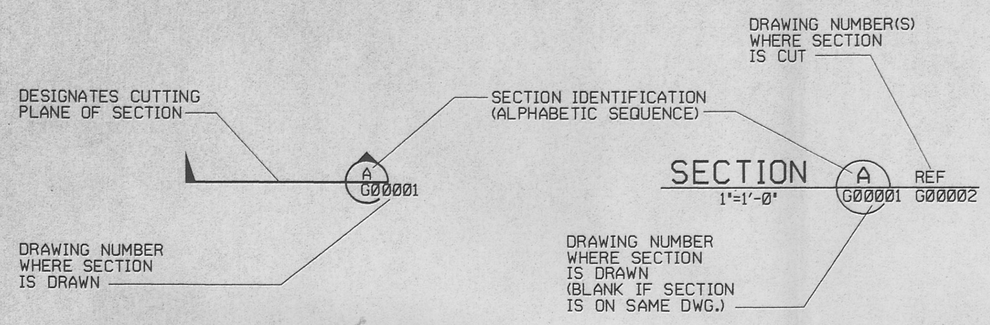
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

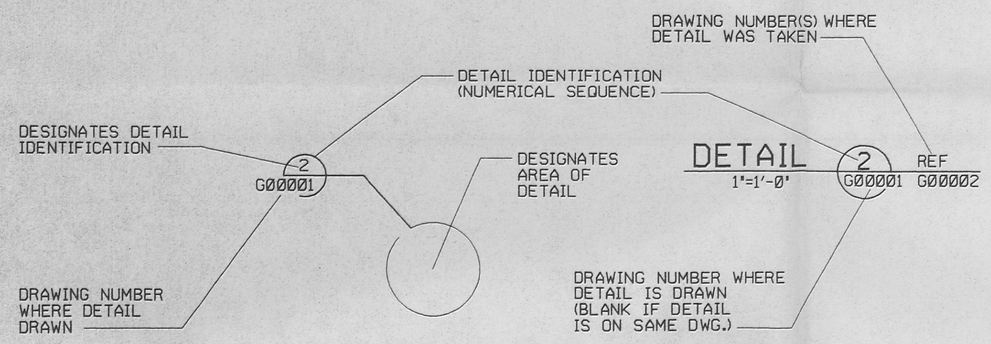
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A/E DATE 7/25/96	N/A DATE	20120

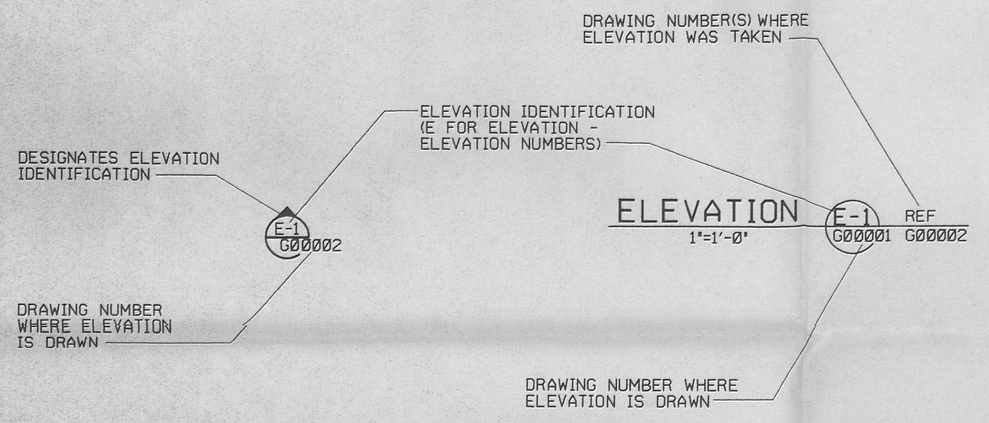
STATE OF OHIO JOHN M. WOOLUP E-046579 REGISTERED PROFESSIONAL ENGINEER

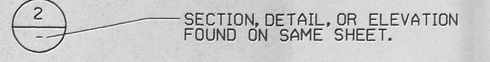
PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00215	G0001	0

GENERAL LEGEND









NOTE:

ABBREVIATED DRAWING NUMBERS WILL BE USED FOR ALL SECTIONS, DETAILS, ELEVATIONS, AND WITHIN NOTES AND CALL OUTS IN THE BODY OF THE DRAWING.

FOR EXAMPLE; 95X-5900-G-00002 = DRAWING NUMBER
G00002 = ABBREVIATED DRAWING NUMBER

DIMENSIONING:

DIMENSIONS AND/OR ELEVATIONS MARKED THUS (+/-) SHALL BE VERIFIED IN THE FIELD BY CONTRACTOR.

USE DIMENSIONS AS SHOWN, DO NOT SCALE.

NTS (NOT TO SCALE) IS SHOWN ONLY WHERE DIMENSION IS OBVIOUSLY OUT OF SCALE.

UTILITY SYMBOLS

EXISTING		PROPOSED
------ ST ------	STORM SEWER	ST
------ SN ------	SANITARY SEWER	SN
------ FG ------	FUEL GAS	FG
------ DW ------	DRINKING WATER	DW
------ FQ1 ------	FIRE PROTECTION	FQ1
------ LS ------	LIVE STEAM	LS
------ WS ------	WATER SUPPLY	WS
------ WR ------	COOLING WATER RETURN	WR
------ TW ------	PROCESS WATER	TW
------ CE ------	CONTAMINATE WATER	CE
------ FT ------	FILTRATE OR EFFLUENT	FT
------ DF ------	DEIONIZED FEED	DF
------ PW ------	DEIONIZED WATER	PW
------ BR ------	BRINE	BR
------ RW ------	RAW WATER	RW
------ A ------	ALARM	A
------ CN ------	STEAM CONDENSATE	CN
------ VE ------	VENT LINES	VE
------ SD ------	SUB-SURFACE DRAINAGE	SD
------ SL ------	SUMP LIQUOR	SL
------ E ------	ELECTRICAL	E
------ OE ------	OVERHEAD ELECTRICAL	OE
------ T ------	TELEPHONE	T
------ G ------	ELECTRIC GROUND	G
------ PA ------	PLANT AIR	PA
------ SA ------	INSTRUMENT AIR SUPPLY	SA
.....	ABANDONED	

BALLOON LEGEND

- PIV — POST INDICATOR VALVE
- SMH — SANITARY MANHOLE
- EMH — ELECTRICAL MANHOLE
- TMH — TELEPHONE MANHOLE
- CB — STORM SEWER CATCH BASIN
- HFH — HIGH PRESSURE FIRE HYDRANT
- LFH — LOW PRESSURE FIRE HYDRANT

GRADING SYMBOLS

EXISTING		PROPOSED
X 584.9	SPOT ELEVATION	X 589.4
------ 584 -------	CONTOUR - MINOR	584
------ 585 -------	CONTOUR - MAJOR	585
(TOE)	SLOPE INDICATOR	(TOE)

SYMBOLS LEGEND

EXISTING		PROPOSED
	POST INDICATOR VALVE (PIV)	
	FIRE HYDRANT (FH)	
	MANHOLE (MH)	S OR D
	CATCH BASIN (CB)	D
	LIGHT POLE	
	PIPE SUPPORT	
	ELECTRICAL MANHOLE	E
	TELEPHONE MANHOLE	T
	STREET WASHERS	
	VALVE BOX	
I313	MONITORING WELL	
	SURFACE DRAINAGE FLOW	
	POWER POLE	
	GRAVEL ROADWAY/DRIVEWAY	
	ASPHALT ROADWAY/DRIVEWAY	
	CONCRETE PAD/ ROADWAY/DRIVEWAY	
	BUILDING/TRAILER	
	RAILROAD TRACK	
	OU BOUNDARY	
	FENCE	
	TREE LINE	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	CENTERLINE DRAINAGE DITCH	
	RIVER/CREEK	
	TO BE REMOVED	
	SILT FENCE	
	ELECTRICAL TRANSFORMER	T
	TRANSMISSION TOWER	
	HEADWALL	OR
BM	BENCH MARK	
xx xx	CONSTRUCTION/WIND BARRIER FENCE	xx xx
	SIGN	
	BOLLARD/GUARD POST	
PB	ELECTRICAL PULL BOX	
	SURVEY CONTROL POINT	
	ROAD CENTERLINE OR BASELINE	
	BEND	OR
	TEE	
	THRUST BLOCK	
	REDUCER	
W OR U	UNKNOWN	
	STRAW BALE SILT BARRIER	
	FENCE GATE	
	CULVERT	
	DRAINAGE CONDUIT	

STATE OF OHIO — JOHN C. MCCLUR — E-046375 — REGISTERED PROFESSIONAL ENGINEER

NOTES

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
LEGENDS AND SYMBOLS 30

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/24/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL: A/E 7/25/96 DATE		FERMCO CRU APPROVAL: N/A DATE		FERMCO PROJECT NUMBER: 20120	
DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/PO158	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-X-00214		X0003	0

INDEX OF DRAWINGS

INDEX CODE NO.	DRAWING NO.	SHEET NO.	REVISION NO.	DRAWING TITLE	REMARKS
	92X-5900-X-00212	X0001	0	PROJECT TITLE SHEET	
	92X-5900-X-00213	X0002	0	DRAWING INDEX	
	92X-5900-X-00214	X0003	0	LEGENDS AND SYMBOLS	
	92X-5900-G-00215	G0001	0	CIVIL - SITE PLAN	
	92X-5900-G-00216	G0002	0	CIVIL - GENERAL NOTES	
	92X-5900-G-00217	G0003	0	CIVIL - GENERAL SUMMARY	
	92X-5900-G-00219	G0004	0	CIVIL - TYPICAL SECTIONS	
	92X-5900-G-00220	G0005	0	CIVIL - PLAN AND PROFILE - SHEET 1 OF 7	
	92X-5900-G-00221	G0006	0	CIVIL - PLAN AND PROFILE - SHEET 2 OF 7	
	92X-5900-G-00222	G0007	0	CIVIL - PLAN AND PROFILE - SHEET 3 OF 7	
	92X-5900-G-00223	G0008	0	CIVIL - PLAN AND PROFILE - SHEET 4 OF 7	
	92X-5900-G-00224	G0009	0	CIVIL - PLAN AND PROFILE - SHEET 5 OF 7	
	92X-5900-G-00225	G0010	0	CIVIL - PLAN AND PROFILE - SHEET 6 OF 7	
	92X-5900-G-00226	G0011	0	CIVIL - PLAN AND PROFILE - SHEET 7 OF 7	
	92X-5900-G-00227	G0012	0	CIVIL - CROSS SECTION - SHEET 1 OF 4	
	92X-5900-G-00228	G0013	0	CIVIL - CROSS SECTION - SHEET 2 OF 4	
	92X-5900-G-00229	G0014	0	CIVIL - CROSS SECTION - SHEET 3 OF 4	
	92X-5900-G-00230	G0015	0	CIVIL - CROSS SECTION - SHEET 4 OF 4	
	92X-5900-G-00231	G0016	0	CIVIL - INTERSECTION DETAIL - SHEET 1 OF 2	
	92X-5900-G-00232	G0017	0	CIVIL - INTERSECTION DETAIL - SHEET 2 OF 2	
	92X-5900-G-00233	G0018	0	CIVIL - TEMPORARY EROSION CONTROL - SHEET 1 OF 2	
	92X-5900-G-00234	G0019	0	CIVIL - TEMPORARY EROSION CONTROL - SHEET 2 OF 2	
	92X-5900-G-00235	G0020	0	CIVIL - SUPERELEVATION TABLES	
	92X-5900-G-00236	G0021	0	CIVIL - MAINTENANCE OF TRAFFIC	
	92X-5900-G-00238	G0022	0	CIVIL - SIGNING AND PAVEMENT MARKING - SHEET 1 OF 2	
	92X-5900-G-00239	G0023	0	CIVIL - SIGNING AND PAVEMENT MARKING - SHEET 2 OF 2	
	92X-5900-G-00240	G0024	0	CIVIL - GENERAL DETAILS - SHEET 1 OF 2	
	92X-5900-G-00241	G0025	0	CIVIL - GENERAL DETAILS - SHEET 2 OF 2	
	92X-5900-G-00242	G0026	0	CIVIL - DRAINAGE SUBSUMMARY	

NOTES

364

REF DWG NO.	DRAWING TITLE

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
DRAWING INDEX 29

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/24/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

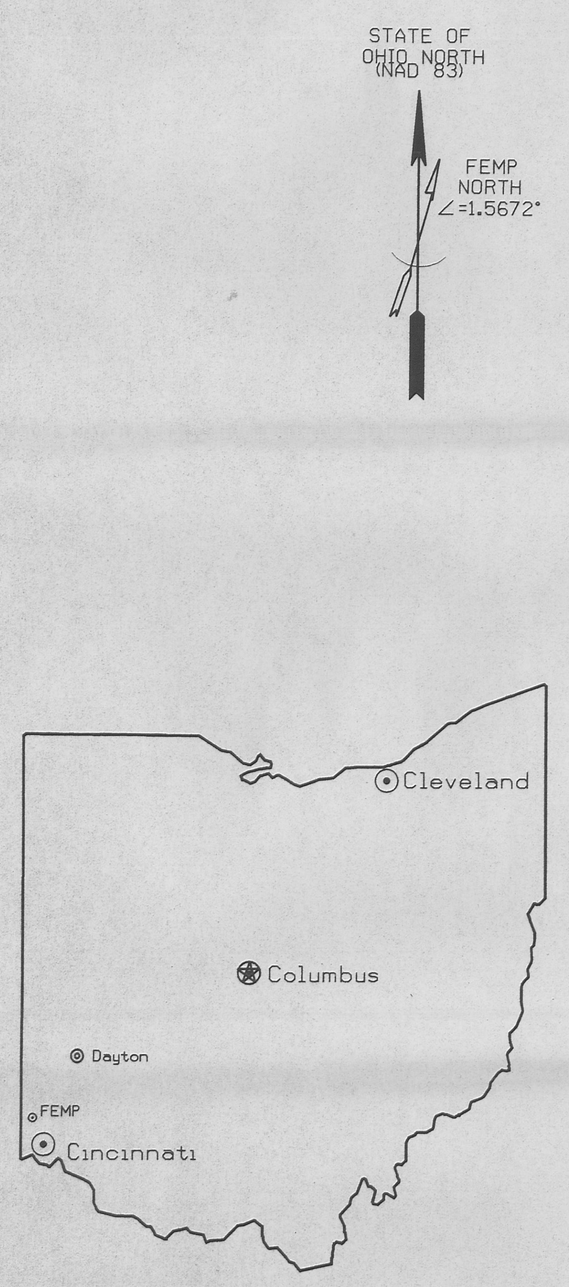
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20120

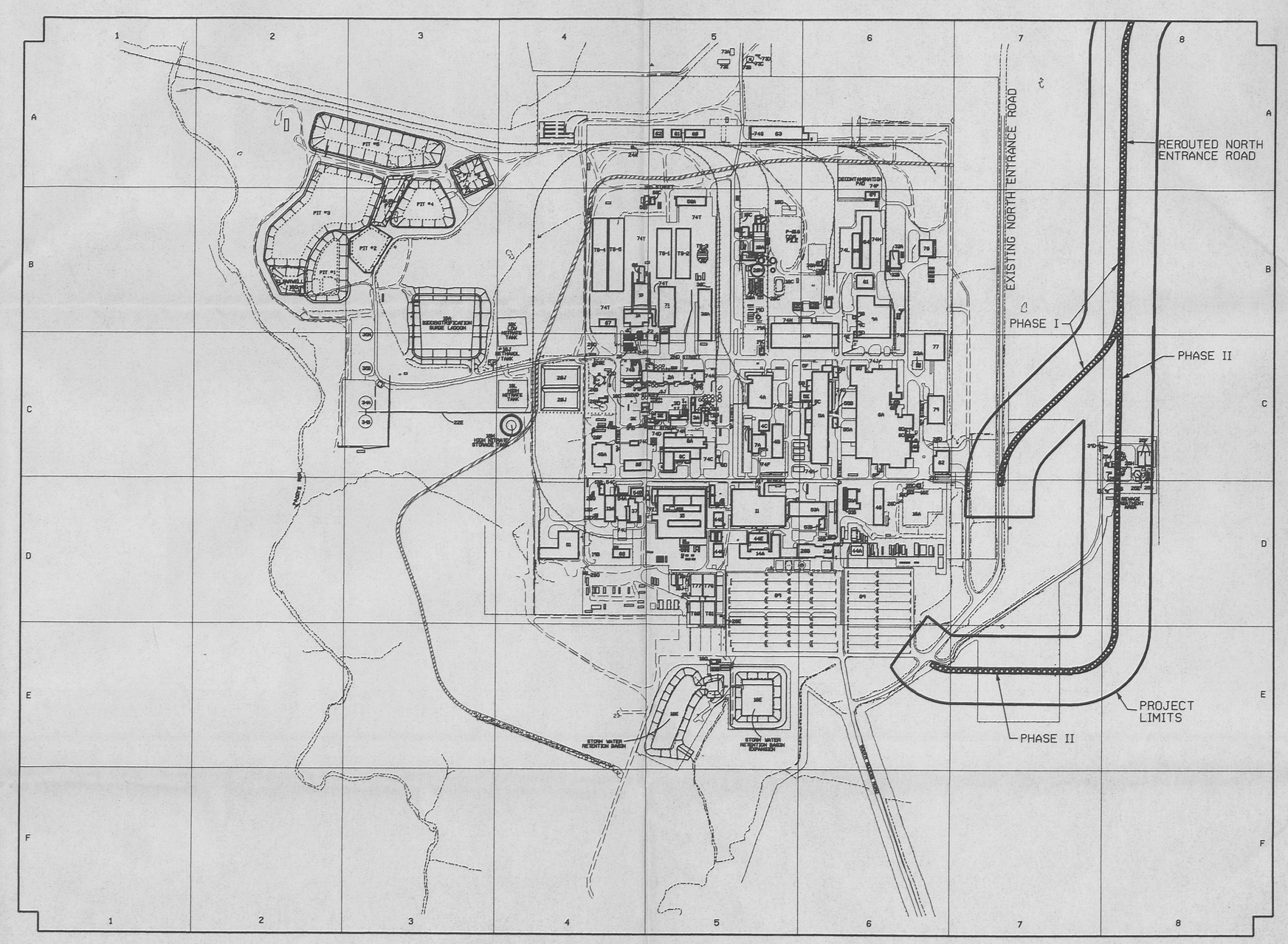
PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-X-00213	X0002	0

STATE OF OHIO — JOHN M. WESLEY — REGISTERED PROFESSIONAL ENGINEER — E-046979

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

REROUTED NORTH ENTRANCE ROAD
CONSTRUCTION
OPERABLE UNIT 2 - PROJECT ORDER 158





PARSONS

The Ralph M. Parsons Company * Parsons Main, Inc. * Engineering-Science, Inc.

ARCHITECTS - ENGINEERS
CINCINNATI, OHIO

NOTES

364

REF DWG NO.	DRAWING TITLE
92X-5900-G-00213	DRAWING INDEX

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERNCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

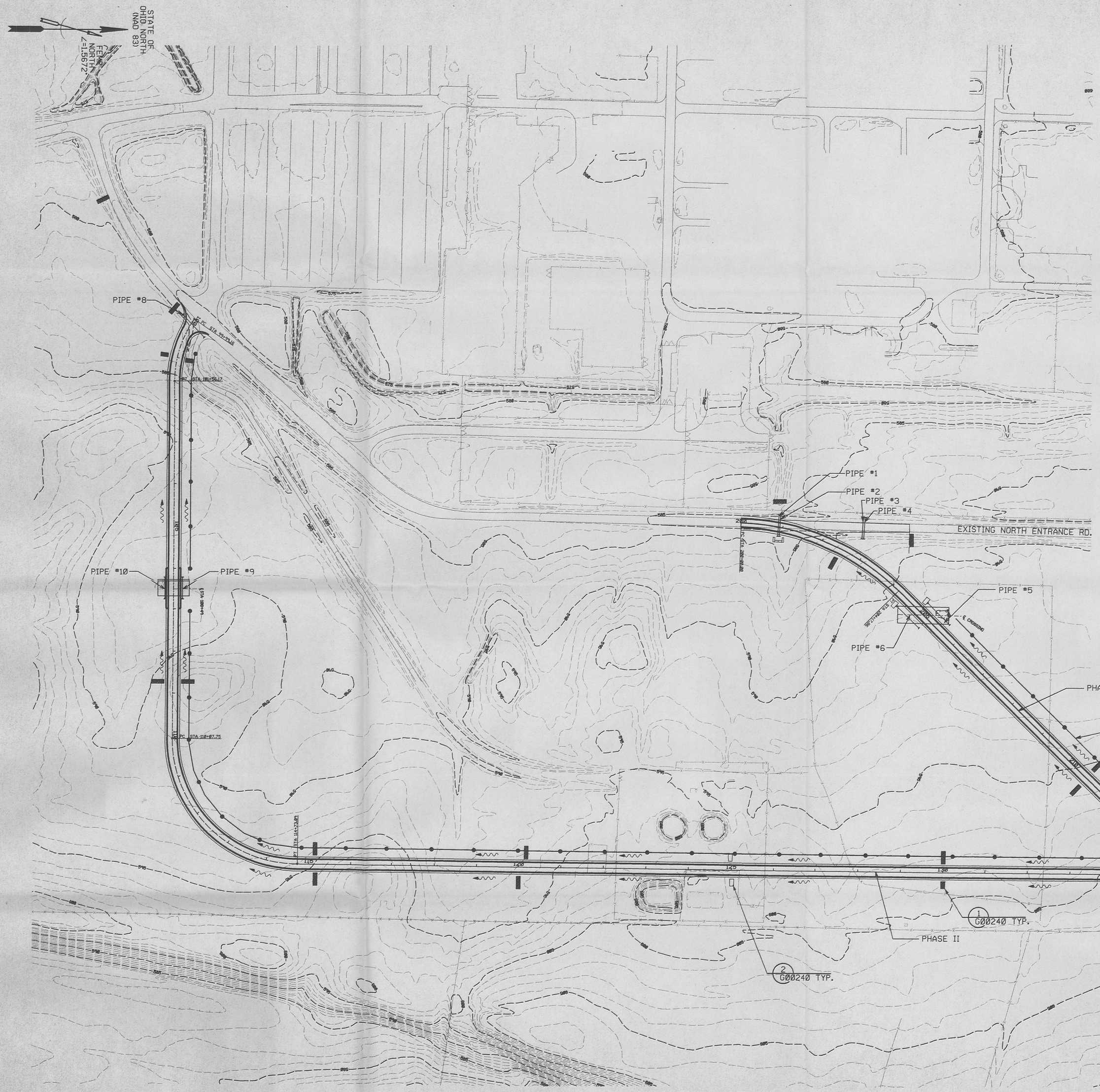
DRAWING TITLE
PROJECT TITLE SHEET 28

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95	John D. Hawley	7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO QRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-X-00212	X0001	0



NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEE DRAWING 92X-5900-G-00240 FOR SEDIMENT CONTROL MEASURES.

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- CHECK DAM

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TEMPORARY EROSION CONTROL
SHEET 1 OF 2

48

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A/E 7/25/96 DATE	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00233	G0018	0

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠+1.56772°

NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEE DRAWING 92X-5900-G-00240 FOR SEDIMENT CONTROL MEASURES.

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- CHECK DAM

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-G-00219	TYPICAL SECTIONS
92X-5900-G-00240	GENERAL DETAILS - SHEET 1 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

STATE OF OHIO — JOHN M. MASLUP — E-040579 — REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TEMPORARY EROSION CONTROL
SHEET 2 OF 2

49

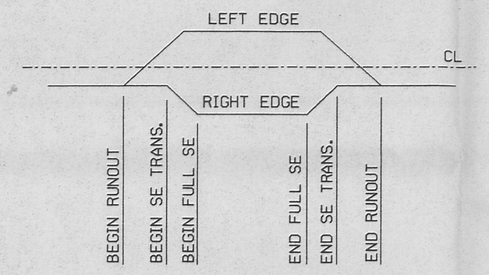
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
DOE PROJECT MGR. DATE 7/25/96		N/A DATE		20120	

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00234	G0019	Ø

SUPERELEVATION TABLES

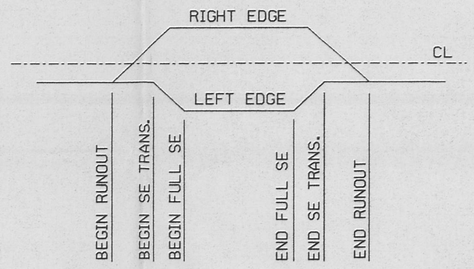
CURVES	STATIONS	CONTROLLING CONDITION	LEFT E.O.P ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
NERDPH1-1 RT	200+00.00	(SEE NOTE 1)	NOTE 1	NOTE 1	584.62	NOTE 1	NOTE 1
	200+50.00	BEGIN FULL SE	NOTE 1	NOTE 1	585.19	NOTE 1	NOTE 1
	201+00.00		586.20	3.70	585.75	585.31	-3.70
	201+50.00		586.77	3.70	586.32	585.88	-3.70
	202+00.00		587.33	3.70	586.89	586.45	-3.70
	202+50.00		587.90	3.70	587.46	587.01	-3.70
	203+00.00		588.47	3.70	588.02	587.58	-3.70
	203+58.50	END FULL SE	588.87	3.70	588.58	588.26	-3.70
	203+50.00		589.07	2.38	588.59	588.15	-3.70
	204+00.00		589.46	2.47	589.16	588.86	-2.47
	204+30.79	END SE TRANS.	589.70	1.56	589.51	589.32	-1.56
	204+50.00		589.85	0.99	589.72	589.54	-1.56
	205+00.00		590.24	-0.49	590.29	590.11	-1.56
	205+36.20	END RUNOUT	590.52	-1.56	590.70	590.52	-1.56
NERDPH1-2 LT	210+36.18	BEGIN RUNOUT	598.70	-1.56	598.89	598.70	-1.56
	210+50.00		599.00	-1.56	599.19	599.05	-1.15
	211+00.00		600.10	-1.56	600.29	600.33	0.33
	211+41.58	BEGIN SE TRANS.	601.02	-1.56	601.20	601.39	1.56
	211+50.00		601.17	-1.81	601.39	601.61	1.81
	212+00.00		602.09	-3.29	602.49	602.88	3.29
	212+13.88	BEGIN FULL SE	602.35	-3.70	602.79	603.24	3.70
	212+50.00		603.14	-3.70	603.59	604.03	3.70
	213+00.00		604.13	-3.70	604.58	605.02	3.70
	213+50.00		604.91	-3.70	605.36	605.80	3.70
	214+00.00		605.48	-3.70	605.92	606.37	3.70
	214+50.00		605.84	-3.70	606.28	606.73	3.70
	215+00.00		606.09	-3.70	606.53	606.98	3.70
	215+14.69	END FULL SE	606.09	-3.70	606.53	606.98	3.70
	215+50.00		606.46	-2.65	606.78	607.10	2.65
	215+74.03	PH I/II MATCHLINE	606.67	-1.94	606.90	607.13	1.94
	137+73.66	PH I/II MATCHLINE	606.67	-1.94	606.90	607.13	1.94
	137+86.62	END SE TRANS.	606.78	-1.56	606.96	607.10	1.56
	138+00.00		606.84	-1.56	607.03	607.34	1.16
	138+50.00		607.09	-1.56	607.28	607.24	-0.32
	138+92.02	END RUNOUT	607.30	-1.56	607.49	607.30	-1.56
NERDPH1-3 RT	161+50.00	BEGIN RUNOUT	610.98	-1.56	611.17	610.98	-1.56
	162+00.00		611.08	-1.13	611.22	611.03	-1.56
	162+50.00		611.33	0.47	611.28	611.09	-1.56
	162+84.04	BEGIN SE TRANS.	611.50	1.56	611.31	611.13	-1.56
	163+00.00		611.58	2.07	611.33	611.08	-2.07
	163+50.00		611.83	3.67	611.39	610.95	-3.67
	163+60.29	BEGIN FULL SE	611.88	4.00	611.40	610.92	-4.00
	164+00.00	(SEE NOTE 1)	NOTE 1	NOTE 1	611.44	NOTE 1	NOTE 1
	164+50.00		NOTE 1	NOTE 1	611.50	NOTE 1	NOTE 1
	164+79.92	MEET EXISTING					

CURVES	STATIONS	CONTROLLING CONDITION	LEFT E.O.P ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
NERDPH2-1 LT	99+99.16	(SEE NOTE 1)	NOTE 1	NOTE 1	580.44	NOTE 1	NOTE 1
	100+00.00		NOTE 1	NOTE 1	580.44	NOTE 1	NOTE 1
	100+50.00	END FULL SE	580.07	-3.08	580.44	580.81	3.08
	100+87.28		580.15	-2.40	580.44	580.73	2.40
	101+00.00		580.18	-2.16	580.44	580.70	2.16
	101+31.03	END SE TRANSITION	580.28	-1.56	580.47	580.65	1.56
	101+50.00		580.32	-1.56	580.51	580.65	1.20
	102+00.00		580.53	-1.56	580.72	580.75	0.24
	102+50.00		580.88	-1.56	581.07	580.98	-0.72
	102+93.53	END RUNOUT	581.29	-1.56	581.48	581.29	-1.56
NERDPH2-2 LT	108+92.04	BEGIN RUNOUT	587.94	-1.56	588.13	587.94	-1.56
	109+00.00		588.03	-1.56	588.22	588.06	-1.30
	109+50.00		588.59	-1.56	588.78	588.81	0.30
	109+89.53	BEGIN SE TRANS.	589.03	-1.56	589.21	589.40	1.56
	110+00.00		589.10	-1.89	589.33	589.56	1.89
	110+50.00		589.47	-3.49	589.89	590.31	3.49
	110+65.75	BEGIN FULL SE	589.58	-4.00	590.06	590.54	4.00
	111+00.00		589.96	-4.00	590.44	590.92	4.00
	111+50.00		590.52	-4.00	591.00	591.48	4.00
	112+00.00		591.07	-4.00	591.55	592.03	4.00
	112+50.00		591.63	-4.00	592.11	592.59	4.00
	113+00.00		592.18	-4.00	592.67	593.14	4.00
	113+50.00		592.74	-4.00	593.22	593.70	4.00
	114+00.00		593.30	-4.00	593.78	594.26	4.00
	114+15.05	END FULL SE	593.46	-4.00	593.94	594.42	4.00
	114+50.00		593.97	-2.88	594.31	594.66	2.88
	114+91.31	END SE TRANS.	594.54	-1.56	594.73	594.92	1.56
	115+00.00		594.62	-1.56	594.81	594.98	1.28
	115+50.00		595.08	-1.56	595.27	595.23	-0.32
	115+88.80	END RUNOUT	595.42	-1.56	595.60	595.42	-1.56



SE TRANSITION

CURVES: NERDPH1-1
NERDPH1-3



SE TRANSITION

CURVES: NERDPH1-2
NERDPH2-1
NERDPH2-2

NOTES

1. THE PAVEMENT SLOPE WILL BE TRANSITIONED TO MEET THE EXISTING PAVEMENT AT STA 99+99.16, STA 100+00, STA 164+79.92 AND STA 200+00. THE TRANSITION LENGTH WILL BE 100 FEET.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
SUPERELEVATION TABLES

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	BOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00235	G0020	0

STATE OF OHIO JOHN M. LUDT E-046279 REGISTERED PROFESSIONAL ENGINEER

364

50

ROAD CLOSED

[1] R11-2(Ø) 30"X48"

ROAD CLOSED AHEAD

[2] W20-3(Ø) 36"X36"

ROAD CLOSED USE WILEY RD ENTRANCE

[3] 30"X48"

NOTES

364

1. THE SUBCONTRACTOR WILL NOT PLACE SIGNS ON ANY PUBLIC (STATE OR COUNTY) ROADWAYS.
2. COORDINATION AND PUBLICATION OF LANE CLOSURE TIMES WILL BE PROVIDED BY FERMCO. ROAD CLOSURES WILL ONLY BE REQUIRED TO COMPLETE THE NORTH AND SOUTH TIE-INS TO THE EXISTING NORTH ENTRANCE ROAD. SUBCONTRACTOR SHALL PROVIDE FERMCO 14-DAY NOTICE PRIOR TO ANY IMPACT OR CLOSURE, ALONG WITH ANY SUPPLEMENTAL TRAFFIC CONTROL LANES.
3. THE SUBCONTRACTOR WILL PROVIDE AND MAINTAIN WARNING LIGHTS FOR THE TYPE III BARRICADES.
4. ALL SIGNS AND BARRICADES SHALL BE PLACED IN ACCORDANCE WITH ODOT STANDARDS AND FERMCO DIRECTION.
5. THE ROAD CLOSED SIGN AND TYPE III BARRICADE SHALL REMAIN IN PLACE UNTIL THE 300FT SECTION OF THE EXISTING NORTH ENTRANCE ROAD IS REMOVED.
6. SIGNS AND BARACADES TO BE RELOCATED AS NECESSARY TO KEEP TRAFFIC OFF ROAD CONSTRUCTION DURING ROAD CONSTRUCTION AND TIE-IN ACTIVITIES.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00215	SITE PLAN

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
MAINTENANCE OF TRAFFIC 51

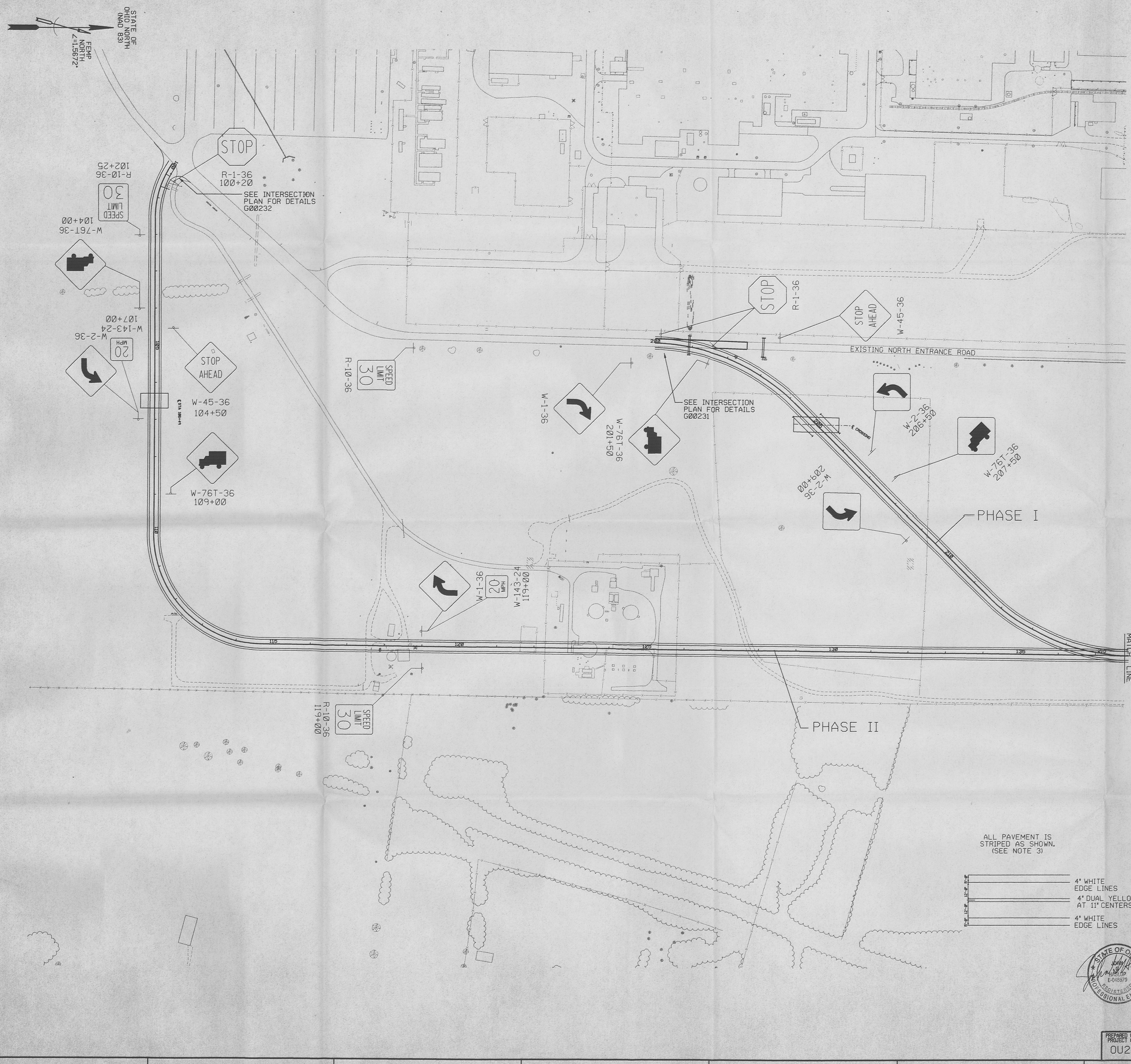
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO. | FLOOR | SCALE: 1" = 200' | CLASS

SUBMITTED FOR APPROVAL: A-E DATE 7/25/96 | FERMCO CRU APPROVAL: N/A DATE | FERMCO PROJECT NUMBER: 20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00236	G0021	Ø



ALL PAVEMENT IS STRIPED AS SHOWN. (SEE NOTE 3)

4" WHITE EDGE LINES
4" DUAL YELLOW LINES AT 11" CENTERS
4" WHITE EDGE LINES

NOTES

1. ALL SIGNS SHOWN ARE NUMBERED IN ACCORDANCE WITH THE OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. THE LOCATION AND HEIGHT OF THE SIGNS SHALL BE IN ACCORDANCE WITH THE STATE OF OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. THE PAVEMENT WILL BE STRIPED WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH ODOT STANDARDS AND SPECIFICATIONS.
4. SEE DRAWINGS 92X-5900-G-00236 FOR TRAFFIC CONTROL DURING CONSTRUCTION.
5. SEE PLAN AND PROFILE DRAWINGS FOR THE LOCATION OF UNDERGROUND UTILITIES. LOCATION OF UTILITIES TO BE VERIFIED IN THE FIELD BY FERMCO PRIOR TO INSTALLING SIGN POST.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00231	INTERSECTION DETAIL - SHEET 1 OF 2
92X-5900-G-00232	INTERSECTION DETAIL - SHEET 2 OF 2
92X-5900-G-00236	MAINTENANCE OF TRAFFIC

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

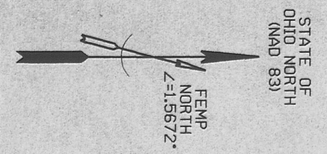
DRAWING TITLE
CIVIL
SIGNING AND PAVEMENT MARKING 52
SHEET 1 OF 2

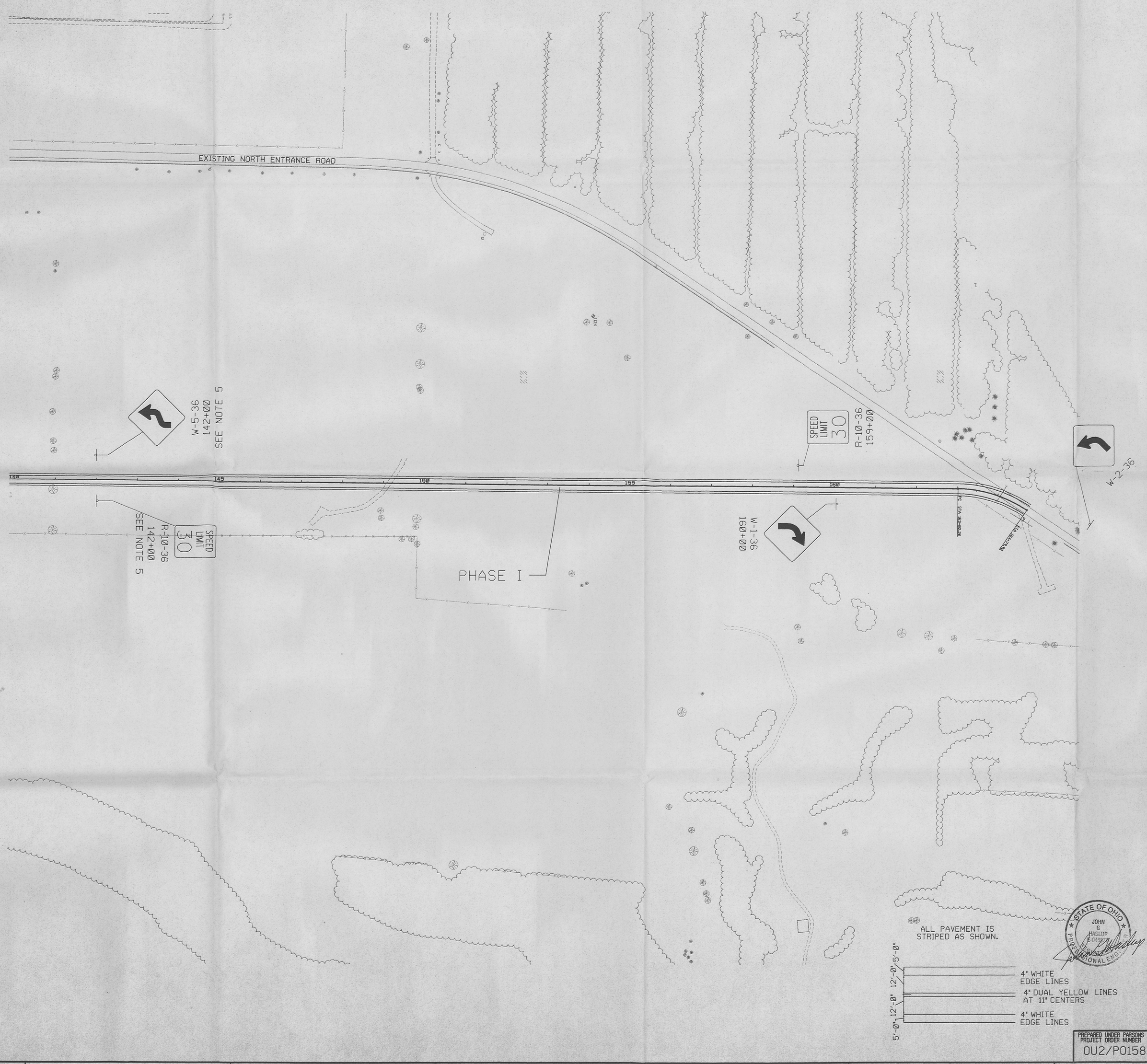
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	DATE N/A	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00238	G0022	0





NOTES

364

1. ALL SIGNS SHOWN ARE NUMBERED IN ACCORDANCE WITH THE OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. THE LOCATION AND HEIGHT OF THE SIGNS SHALL BE IN ACCORDANCE WITH THE STATE OF OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. THE PAVEMENT WILL BE STRIPED WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH ODOT STANDARDS AND SPECIFICATIONS.
4. SEE DRAWINGS 92X-5900-G-00236 FOR TRAFFIC CONTROL DURING CONSTRUCTION.
5. SIGNS TO BE REMOVED AND/OR RELOCATED AS PART OF PHASE II CONSTRUCTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-G-00214	LEGENDS AND SYMBOLS
92X-5900-G-00236	MAINTENANCE OF TRAFFIC

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
SIGNING AND PAVEMENT MARKING 53
SHEET 2 OF 2

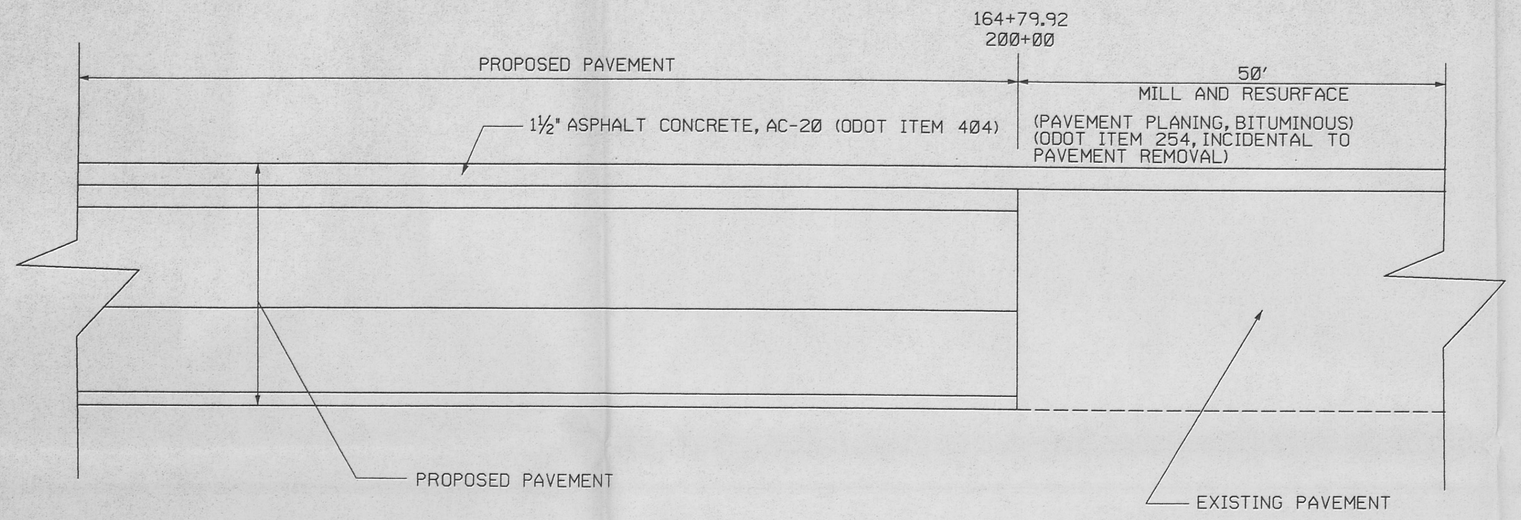
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

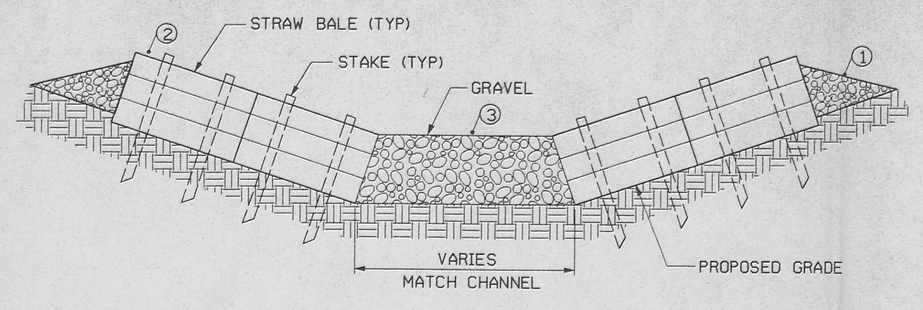
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
DATE 7/25/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00239	G0023	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

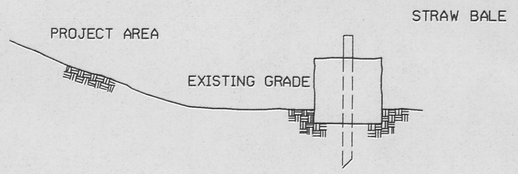


CONNECTION TO EXISTING PAVEMENT - STA. 164+79.92 AND 200+00



① INSTALL STRAW BALE AS SHOWN ON DETAIL.
② GRAVEL TO BE ODOT ITEM 601.07, TYPE D DUMPED ROCK. TOP WIDTH TO BE SAME AS STRAW BALES.

CHECK DAM DETAIL (1) REF
NTS G00240 G00233 G00234



SECTION

NOTE:
1. STRAW BALES TO BE USED WHEN NATURAL GROUND IS LEVEL OR SLOPING AWAY FROM PROJECT.
2. PLACE STRAW BALES APPROXIMATELY PARALLEL TO BOTTOM OF FILL SLOPE.
3. STAKES SHALL BE 2" x 2" x 3'-0" LONG.
4. STRAW BALES SHALL BE STANDARD SIZE 18" x 18" x 48".
5. FOR EROSION CONTROL MAINTENANCE SEE SPECIFICATIONS.

STRAW BALE - SILT BARRIER DETAIL (2) REF
NTS G00240 G00233 G00234

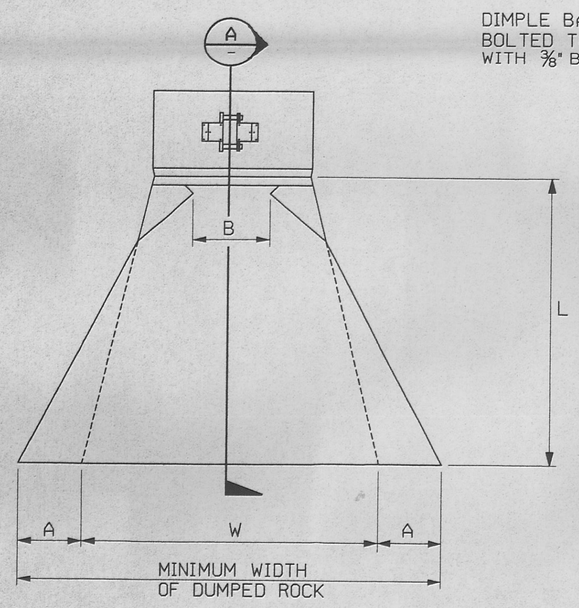
NOTES

1. STRAW BALES ARE BEING USED TO MINIMIZE WASTE GENERATION ACCORDING TO FEMP WASTE MINIMIZATION PROGRAM.

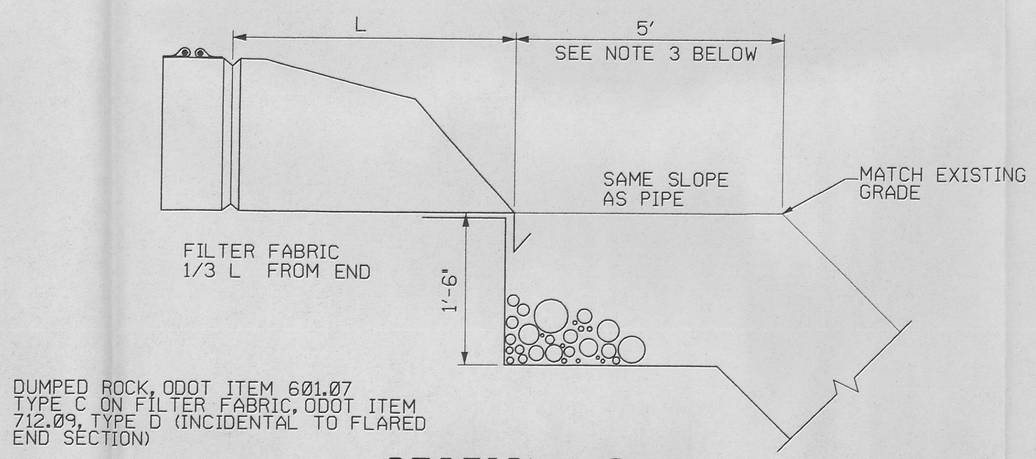
REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	TITLE SHEET
92X-5900-X-00214	LEGENDS AND SYMBOLS
92X-5900-G-00220	PLAN AND PROFILE - SHEET 1 OF 7
92X-5900-G-00223	PLAN AND PROFILE - SHEET 4 OF 7
92X-5900-G-00224	PLAN AND PROFILE - SHEET 5 OF 7
92X-5900-G-00225	PLAN AND PROFILE - SHEET 6 OF 7
92X-5900-G-00231	INTERSECTION DETAIL - SHEET 1 OF 2
92X-5900-G-00232	INTERSECTION DETAIL - SHEET 2 OF 2
92X-5900-G-00233	TEMPORARY EROSION CONTROL - SHEET 1 OF 2
92X-5900-G-00234	TEMPORARY EROSION CONTROL - SHEET 2 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A	7/26/96



PLAN
NTS



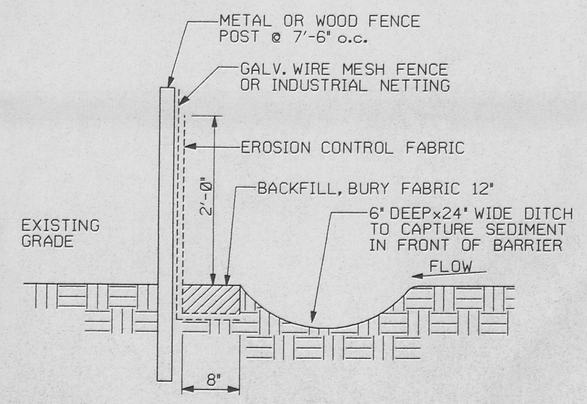
SECTION (A)
NTS

DETAIL (2) REF
STANDARD FLARED END SECTION G00240 G00220 G00223 G00224 G00225 G00231 G00232
NTS

1. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. MATERIAL TO BE GALVANIZED STEEL.
3. LENGTH OF DUMPED ROCK IS 5' UNLESS NOTED OTHERWISE ON SITE/GRADING/UTILITY PLAN
4. DIMENSIONS, IN INCHES, ARE AS FOLLOWS:

13"X17"	12" DIA	15" DIA	24" DIA	42" DIA
A=6.5 (1" ±)	A=6.5 (1" ±)	A=7.5 (1" ±)	A=10 (1"±)	A=17 (1"±)
L=20 (1.5" ±)	L=21 (1.5" ±)	L=26 (1.5" ±)	L=41 (1.5"±)	L=69 (1.5" ±)
W=30 (2" ±)	W=24 (2" ±)	W=30 (2" ±)	W=48 (2"±)	W=84 (2"±)
B=8.5 MAX	B=6.5 MAX	B=8 MAX	B= 13 MAX	B= 29 MAX

NOTE: OVERLAP FABRIC AT JOINTS AT POST TO PREVENT LEAKAGE OF SILT AT SEAM.



FILTER FABRIC BARRIER

SILT FENCE DETAIL (3) REF
NTS G00240 G00233 G00234

STATE OF OHIO — JOHN M. MEYER — E-46579 — REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
GENERAL DETAILS
SHEET 1 OF 2

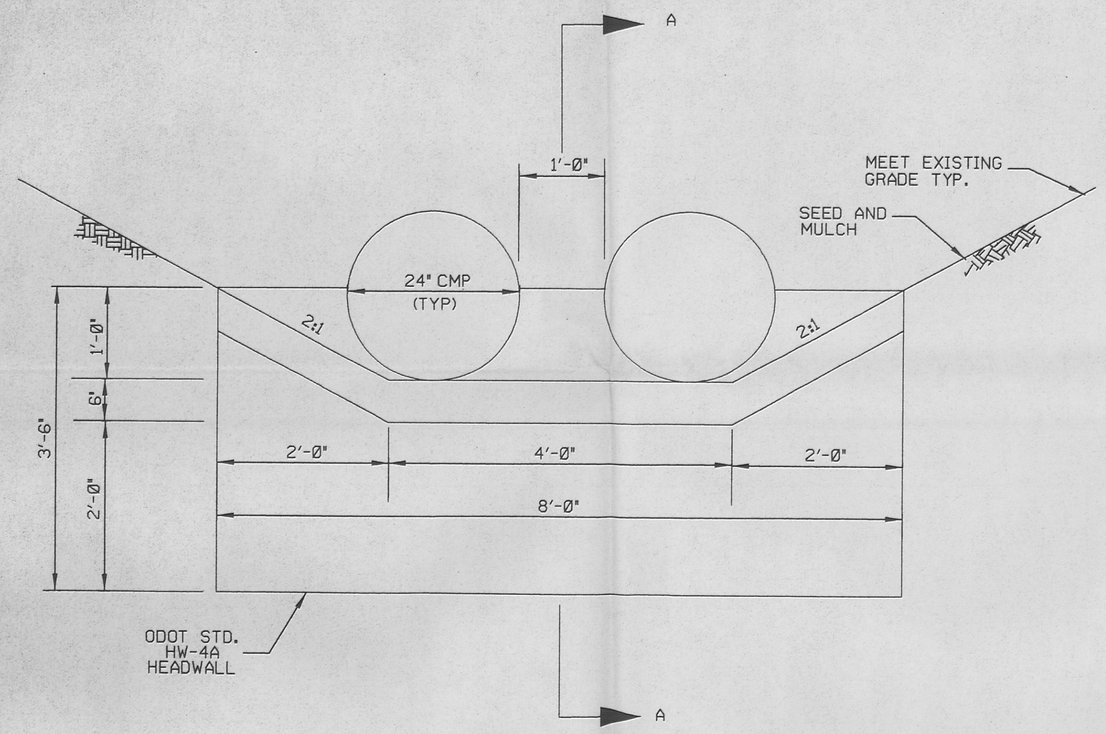
54

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95	[signature]	7/26/96	A. CHRISTO	12/18/95

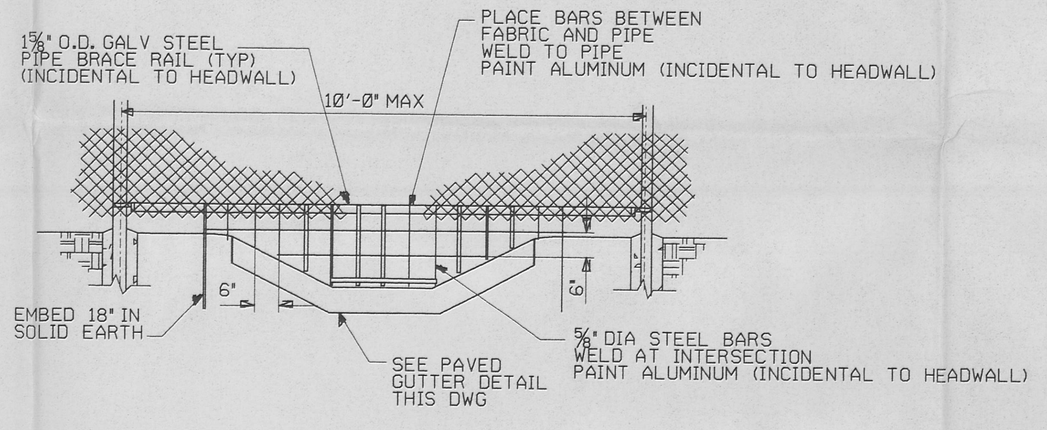
PLANT/BLDG. NO.	#LOOP	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E [signature] DATE 7/26/96	N/A DATE	20120

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00240	G0024	0

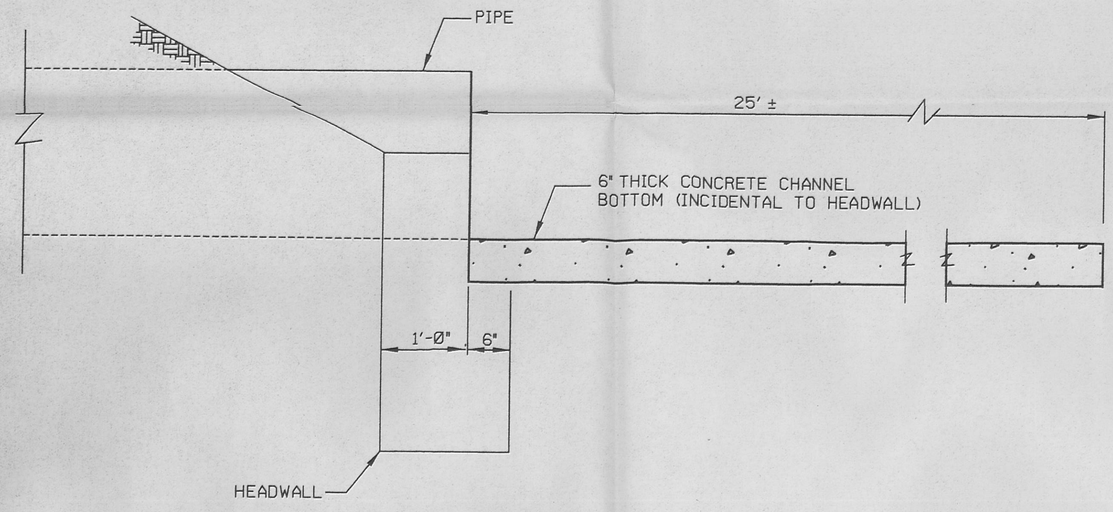


OUTLET ELEVATION



FENCING ACROSS DITCH

NTS



SECTION A-A

1 / G00241 REF G00231 NTS

NOTES

1. CONCRETE SHALL BE ODOT ITEM 499, CLASS F (3,000 PSI MIN).

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
GENERAL DETAILS
SHEET 2 OF 2

55

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	RDOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A/E DATE 7/25/96	N/A DATE	20120

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00241	G0025	0

STATE OF OHIO JOHN M. WEBER REGISTERED PROFESSIONAL ENGINEER

364

PLAN AND PROFILE SHEET	CMP NO.	STA	NAD 83 N	NAD 83 E	SIZE AND TYPE	INVERT ELEVATION	ROCK CHANNEL PROTECTION	END TREATMENT
92X-5900-G-00225	1	200+86 L	480,262.01	1,350,851.40	50 LF - 24" CMP	581.93	4' x 4' x 1', TYPE D	ODOT STD. HW-4A
92X-5900-G-00225	2	200+93 R	480,259.09	1,350,901.32		582.35		
92X-5900-G-00225	3	200+90 L	480,265.51	1,350,851.61	50 LF - 24" CMP	581.93	4' x 4' x 1', TYPE D	ODOT STD. HW-4A
92X-5900-G-00225	4	200+96 R	480,262.59	1,350,901.53		582.35		
92X-5900-G-00225	5	202+59 L	480,461.88	1,350,856.77	50 LF - 30" CMP	583.50		ODOT STD. HW-4A
92X-5900-G-00225	6	202+78 L	480,458.97	1,350,906.74		583.60		
92X-5900-G-00225	7	202+62 L	480,465.87	1,350,857.00	50 LF - 30" CMP	583.50		ODOT STD. HW-4A
92X-5900-G-00225	8	202+81 L	480,462.96	1,350,906.97		583.60		
92X-5900-G-00225	9	204+89 L	480,616.12	1,351,061.90	70 LF - 13" x 17" CMPA	586.60		STD. FLARED END SECTION
92X-5900-G-00225	10	205+59 L	480,665.61	1,351,111.39		587.58		STD. FLARED END SECTION
92X-5900-G-00225	11	204+43 R	480,543.04	1,351,069.43	70 LF - 13" x 17" CMPA	586.37		STD. FLARED END SECTION
92X-5900-G-00225	12	205+13 R	480,592.61	1,351,118.84		587.35		STD. FLARED END SECTION
92X-5900-G-00224	13	159+60 L	483,612.31	1,351,698.40	75 LF - 24" CMP	606.00		STD. FLARED END SECTION
92X-5900-G-00224	14	159+60 R	483,612.31	1,351,773.40		605.60		STD. FLARED END SECTION
92X-5900-G-00220	15	100+06 R	478,854.01	1,350,378.05	70 LF - 42" CMP	574.60		STD. FLARED END SECTION
92X-5900-G-00220	16	100+25 L	478,902.17	1,350,428.86		575.00		STD. FLARED END SECTION
92X-5900-G-00220		100+00 L					100' x 4' x 1', TYPE D	
92X-5900-G-00220		100+00 R					100' x 4' x 1', TYPE D	
92X-5900-G-00220	17	106+24 L	478,853.66	1,351,002.63	50 LF - 13" x 17" CMPA	582.80		STD. FLARED END SECTION
92X-5900-G-00220	18	106+74 L	478,853.66	1,351,052.63		582.58		STD. FLARED END SECTION
92X-5900-G-00220	19	106+24 R	478,812.24	1,351,002.63	50 LF - 13" x 17" CMPA	583.31		STD. FLARED END SECTION
92X-5900-G-00220	20	106+74 R	478,812.24	1,351,052.63		583.12		STD. FLARED END SECTION

NOTES

364

1. DRIVEWAY CULVERTS NOT LISTED. INSTALL IN DITCH LINE AS SHOWN ON THE PLAN AND PROFILE SHEETS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00213	DRAWING INDEX
92X-5900-X-00214	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERNCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMH	N/A 7/26/96

STATE OF OHIO JOHN M. HEILIG E-046579 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
REROUTED NORTH ENTRANCE ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
DRAINAGE SUBSUMMARY

56

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/22/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERNCO CRU APPROVAL	FERNCO PROJECT NUMBER
A-E DATE 7/26/96	N/A DATE	20120

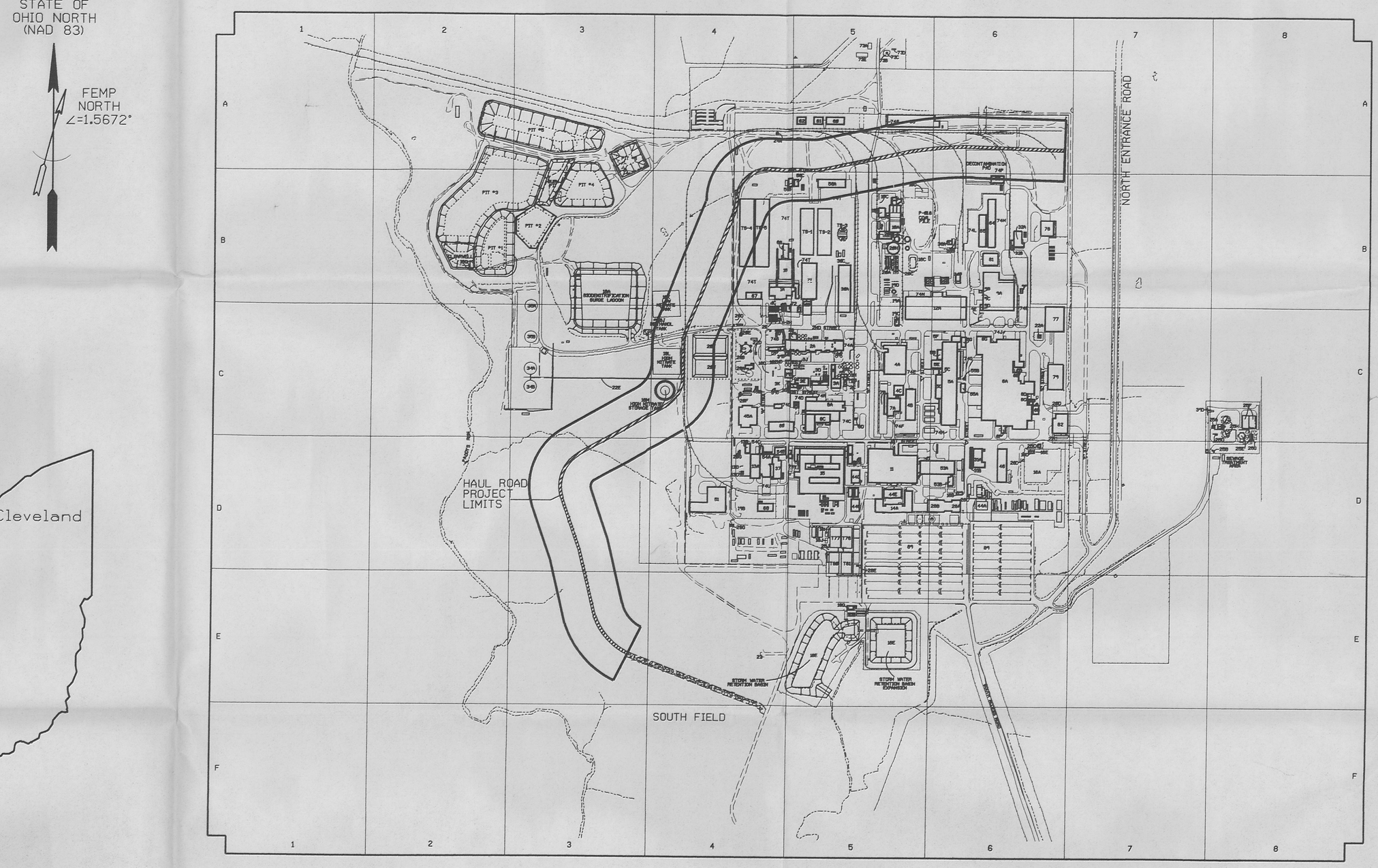
DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.2.3.6 00-9070I	92X-5900-G-00242	G0026	0

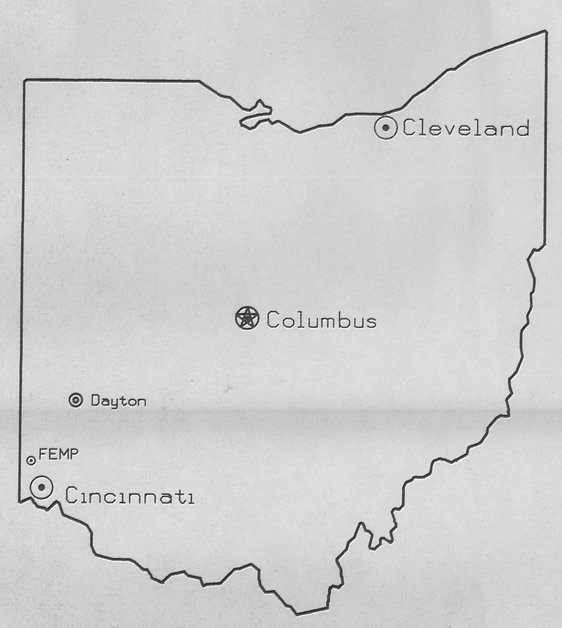
UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

HAUL ROAD
CONSTRUCTION
OPERABLE UNIT 2 - PROJECT ORDER 158

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°





PARSONS

The Ralph M. Parsons Company * Parsons Main, Inc. * Engineering-Science, Inc.

ARCHITECTS - ENGINEERS
CINCINNATI, OHIO

NOTES 364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
PROJECT TITLE SHEET 57

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		1/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-X-00177	X0001	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

STATE OF OHIO JOHN M. MULLIP E-61575 REGISTERED PROFESSIONAL ENGINEER

INDEX OF DRAWINGS

INDEX CODE NO.	DRAWING NO.	SHEET NO.	REVISION NO.	DRAWING TITLE	REMARKS
	92X-5900-X-00177	X0001	0	PROJECT TITLE SHEET	
	92X-5900-X-00178	X0002	0	DRAWING INDEX	
	92X-5900-X-00179	X0003	0	LEGENDS AND SYMBOLS	
	92X-5900-G-00180	G0001	0	CIVIL - SITE PLAN	
	92X-5900-G-00181	G0002	0	CIVIL - GENERAL NOTES	
	92X-5900-G-00182	G0003	0	CIVIL - GENERAL SUMMARY	
	92X-5900-G-00184	G0004	0	CIVIL - TYPICAL SECTIONS	
	92X-5900-G-00185	G0005	0	CIVIL - PLAN AND PROFILE - SHEET 1 OF 5	
	92X-5900-G-00186	G0006	0	CIVIL - PLAN AND PROFILE - SHEET 2 OF 5	
	92X-5900-G-00187	G0007	0	CIVIL - PLAN AND PROFILE - SHEET 3 OF 5	
	92X-5900-G-00188	G0008	0	CIVIL - PLAN AND PROFILE - SHEET 4 OF 5	
	92X-5900-G-00189	G0009	0	CIVIL - PLAN AND PROFILE - SHEET 5 OF 5	
	92X-5900-G-00191	G0010	0	CIVIL - CROSS SECTION - SHEET 1 OF 6	
	92X-5900-G-00192	G0011	0	CIVIL - CROSS SECTION - SHEET 2 OF 6	
	92X-5900-G-00193	G0012	0	CIVIL - CROSS SECTION - SHEET 3 OF 6	
	92X-5900-G-00194	G0013	0	CIVIL - CROSS SECTION - SHEET 4 OF 6	
	92X-5900-G-00195	G0014	0	CIVIL - CROSS SECTION - SHEET 5 OF 6	
	92X-5900-G-00196	G0015	0	CIVIL - CROSS SECTION - SHEET 6 OF 6	
	92X-5900-G-00199	G0016	0	CIVIL - INTERSECTION DETAIL	
	92X-5900-G-00200	G0017	0	CIVIL - TEMPORARY EROSION CONTROL - SHEET 1 OF 2	
	92X-5900-G-00201	G0018	0	CIVIL - TEMPORARY EROSION CONTROL - SHEET 2 OF 2	
	92X-5900-G-00203	G0019	0	CIVIL - SUPERELEVATION TABLES	
	92X-5900-G-00204	G0020	0	CIVIL - GENERAL DETAILS - SHEET 1 OF 2	
	92X-5900-G-00205	G0021	0	CIVIL - GENERAL DETAILS - SHEET 2 OF 2	
	92X-5900-G-00208	G0022	0	CIVIL - PAVEMENT MARKING & SIGNING - SHEET 1 OF 2	
	92X-5900-G-00209	G0023	0	CIVIL - PAVEMENT MARKING & SIGNING - SHEET 2 OF 2	
	92X-5900-G-00210	G0024	0	CIVIL - DRAINAGE SUBSUMMARY	
	92X-5900-E-00246	E0001	0	ELECTRICAL - SITE PLAN - HAUL ROAD	
	92X-5900-E-00247	E0002	0	ELECTRICAL - PLAN AND DETAILS - PEDESTRIAN CROSSING	
	92X-5900-S-00334	S0001	0	STRUCTURAL - FRAMING PLAN AND ELEVATIONS - PEDESTRIAN BRIDGE	
	92X-5900-S-00335	S0002	0	STRUCTURAL - FRAMING SECTIONS AND DETAILS - PEDESTRIAN BRIDGE	
	92X-5900-S-00336	S0003	0	STRUCTURAL - FOUNDATION PLANS, SECTIONS, AND DETAILS - PEDESTRIAN BRIDGE	
	92X-5900-S-00337	S0004	0	STRUCTURAL - FOUNDATION PLAN, SECTIONS, AND DETAILS - K-65 UTILITY TRENCH ROAD CROSSING	

NOTES 364

REF DWG NO.	DRAWING TITLE

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
DRAWING INDEX 58

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

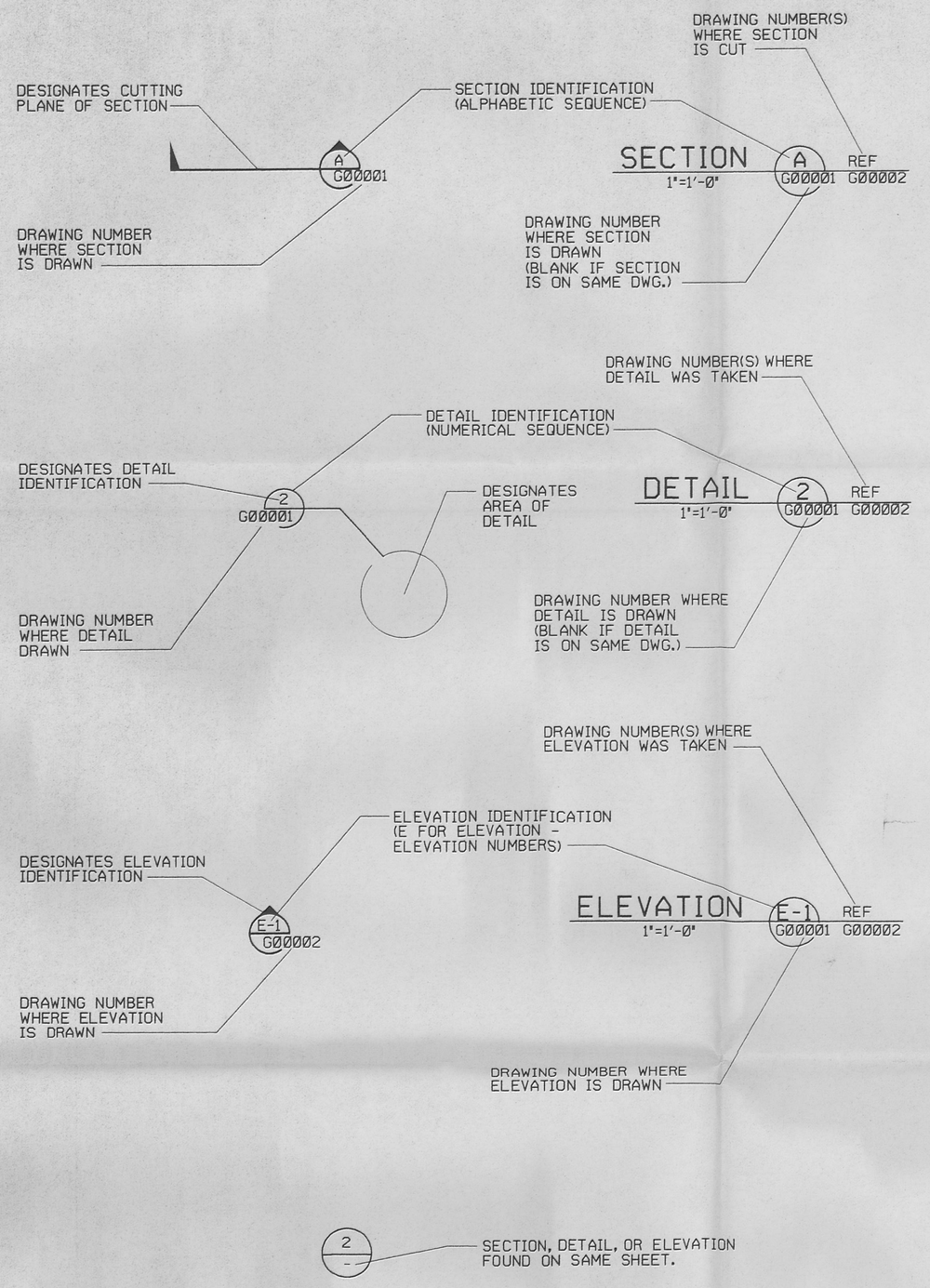
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.2.3.6 00-90701	92X-5900-X-00178	X0002	0

STATE OF OHIO — E-090379 — REGISTERED PROFESSIONAL ENGINEER

GENERAL LEGEND



NOTE:

ABBREVIATED DRAWING NUMBERS WILL BE USED FOR ALL SECTIONS, DETAILS, ELEVATIONS, AND WITHIN NOTES AND CALL OUTS IN THE BODY OF THE DRAWING.

FOR EXAMPLE; 95X-5900-G-00002 = DRAWING NUMBER
G00002 = ABBREVIATED DRAWING NUMBER

DIMENSIONING:

DIMENSIONS AND/OR ELEVATIONS MARKED THUS (+/-) SHALL BE VERIFIED IN THE FIELD BY CONTRACTOR.

USE DIMENSIONS AS SHOWN, DO NOT SCALE.

NTS (NOT TO SCALE) IS SHOWN ONLY WHERE DIMENSION IS OBVIOUSLY OUT OF SCALE.

UTILITY SYMBOLS

EXISTING		PROPOSED
------ ST ------	STORM SEWER	——— ST ———
------ SN ------	SANITARY SEWER	——— SN ———
------ FG ------	FUEL GAS	——— FG ———
------ DW ------	DRINKING WATER	——— DW ———
------ FQ1 ------	FIRE PROTECTION	——— FQ1 ———
------ LS ------	LIVE STEAM	——— LS ———
------ WS ------	WATER SUPPLY	——— WS ———
------ WR ------	COOLING WATER RETURN	——— WR ———
------ TW ------	PROCESS WATER	——— TW ———
------ CE ------	CONTAMINATE WATER	——— CE ———
------ FT ------	FILTRATE OR EFFLUENT	——— FT ———
------ DF ------	DEIONIZED FEED	——— DF ———
------ PW ------	DEIONIZED WATER	——— PW ———
------ BR ------	BRINE	——— BR ———
------ RW ------	RAW WATER	——— RW ———
------ A ------	ALARM	——— A ———
------ CN ------	STEAM CONDENSATE	——— CN ———
------ VE ------	VENT LINES	——— VE ———
------ SD ------	SUB-SURFACE DRAINAGE	——— SD ———
------ SL ------	SUMP LIQUOR	——— SL ———
------ E ------	ELECTRICAL	——— E ———
------ OE --◇--	OVERHEAD ELECTRICAL	——— OE ———
------ T ------	TELEPHONE	——— T ———
------ G ------	ELECTRIC GROUND	——— G ———
------ PA ------	PLANT AIR	——— PA ———
------ SA ------	INSTRUMENT AIR SUPPLY	——— SA ———
.....	ABANDONED	

BALLOON LEGEND

- PIV — POST INDICATOR VALVE
- SMH — SANITARY MANHOLE
- EMH — ELECTRICAL MANHOLE
- TMH — TELEPHONE MANHOLE
- CB — STORM SEWER CATCH BASIN
- HFH — HIGH PRESSURE FIRE HYDRANT
- LFH — LOW PRESSURE FIRE HYDRANT
- CMP — DRAINAGE CONDUIT
- FT — LEACHATE TRANSMISSION LINE
- ST — STORM DRAINAGE STRUCTURE BY OTHERS (OU-1 AREA)

GRADING SYMBOLS

EXISTING		PROPOSED
X 584.9	SPOT ELEVATION	X 589.4
------ 584 ------	CONTOUR - MINOR	584
------ 585 ------	CONTOUR - MAJOR	585
(TOE)	SLOPE INDICATOR	(TOE)

SYMBOLS LEGEND

EXISTING		PROPOSED
	POST INDICATOR VALVE (PIV)	
	FIRE HYDRANT (FH)	
	MANHOLE (MH)	Ⓢ OR Ⓓ
	CATCH BASIN (CB)	D
	LIGHT POLE	
	PIPE SUPPORT	
	ELECTRICAL MANHOLE	E
	TELEPHONE MANHOLE	T
	STREET WASHERS	
	VALVE BOX	
1313	MONITORING WELL	
	SURFACE DRAINAGE FLOW	
	POWER POLE	
	GRAVEL ROADWAY/DRIVEWAY	
	ASPHALT ROADWAY/DRIVEWAY	
	CONCRETE PAD/ ROADWAY/DRIVEWAY	
	BUILDING/TRAILER	
	RAILROAD TRACK	
	OU BOUNDARY	
	FENCE	
	TREE LINE	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	CENTERLINE DRAINAGE DITCH	
	RIVER/CREEK	
	TO BE REMOVED	
	SILT FENCE	
	ELECTRICAL TRANSFORMER	T
	TRANSMISSION TOWER	
	HEADWALL	— OR
BM	BENCH MARK	
XX XX	CONSTRUCTION/WIND BARRIER FENCE	XX XX
	SIGN	
	BOLLARD/GUARD POST	
PB	ELECTRICAL PULL BOX	
	SURVEY CONTROL POINT	
	ROAD CENTERLINE OR BASELINE	
	BEND	OR
	TEE	
	THRUST BLOCK	
	REDUCER	
W OR U	UNKNOWN	
	STRAW BALE SILT BARRIER	
	FENCE GATE	
	CULVERT	

NOTES

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	INITIALS AND DATE A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
LEGENDS AND SYMBOLS 59

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

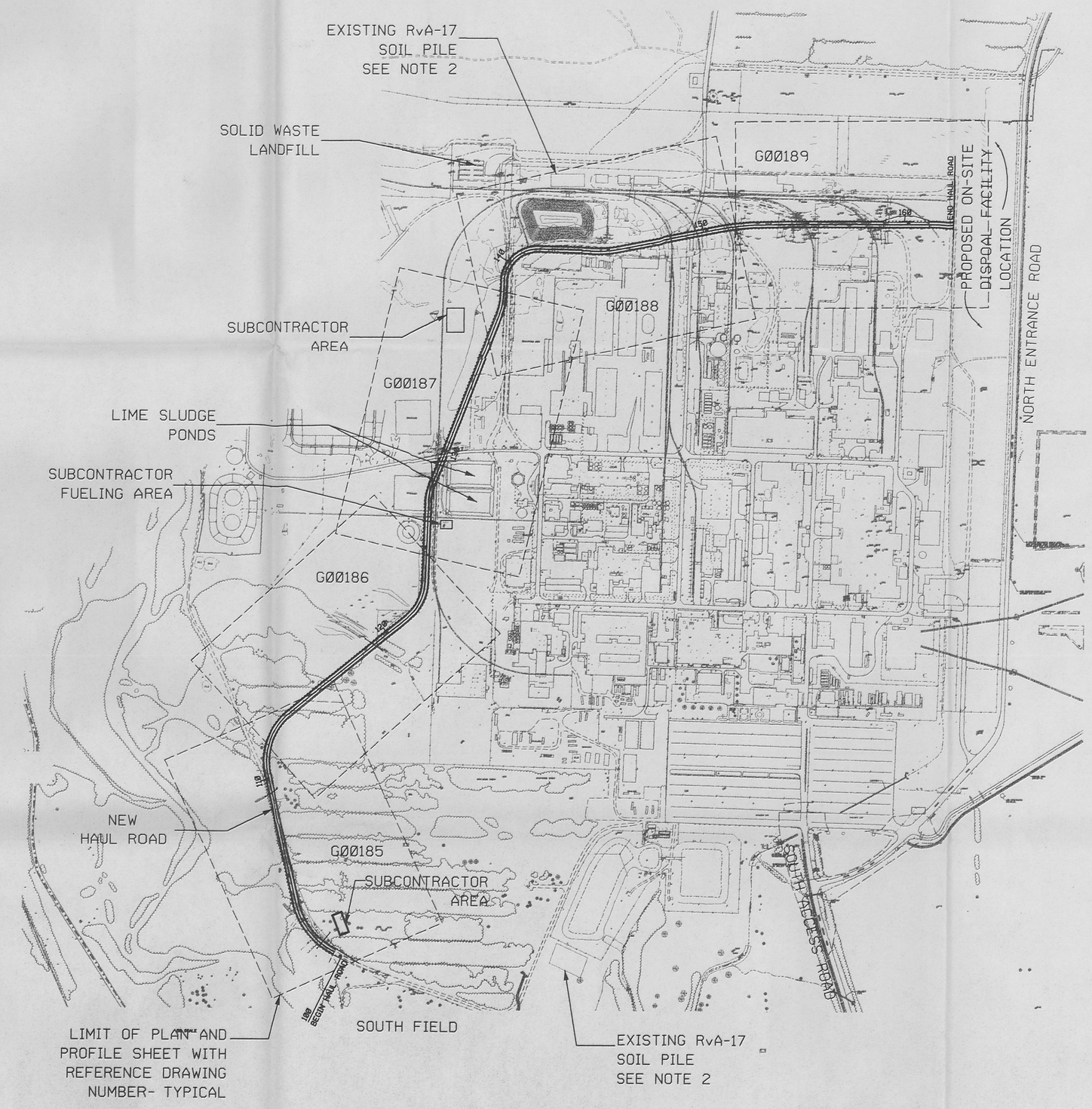
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

STATE OF OHIO — MASLUP E-046379 — REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE/PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-X-00179	X0003	0

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°



NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED FROM FEMP SITE PROVIDED DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992.
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.

2. EXCESS SOIL TO BE PLACED ON RvA-17 SOIL PILE AS DIRECTED BY FERMCO.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00185	PLAN AND PROFILE - SHEET 1 OF 5
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00188	PLAN AND PROFILE - SHEET 4 OF 5
92X-5900-G-00189	PLAN AND PROFILE - SHEET 5 OF 5

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL SITE PLAN 60

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
A-E DATE 7/25/96		DATE N/A		20410	
DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.		SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00180		G0001	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

1. UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM FERMCO AS REQUIRED BY SECTION 153.64 O.R.C.
THE LOCATIONS AND DEPTHS SHALL BE FIELD VERIFIED BY THE SUBCONTRACTOR PRIOR TO EXCAVATION, AND COORDINATED WITH FERMCO. ANY UNPLANNED ENCOUNTERS WITH UTILITIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF FERMCO.

2. ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM. (NGVD OF 29, AND NAD 83 FOR COORDINATES). SURVEY CONTROL POINTS ARE SHOWN. SUBCONTRACTOR SHALL PROTECT SURVEY CONTROL POINTS FROM DAMAGE UNLESS THEY ARE IN THE FOOTPRINT OF THE ROAD.

3. WORK LIMITS

THE WORK LIMITS SHALL BE DETERMINED BY FERMCO.
THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE SUBCONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS, SUBJECT TO FERMCO APPROVAL.

4. PAVING AT RAILROAD CROSSING (VICINITY STA 128+90)

TIMBER CROSSING AT RAILROAD TO BE INSTALLED BY OTHERS. THE CROWN SHALL BE MODIFIED ON EACH SIDE OF THE RAILROAD CROSSING, BEGINNING 50 FEET FROM THE NEAREST RAIL, BY RAISING THE EDGES OF THE NEW PAVEMENT TO MEET THE PLATFORM ELEVATION.

5. MAINTENANCE OF TRAFFIC

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE SUBCONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. WORK SHALL BE COORDINATED WITH FERMCO. TWO DAYS NOTICE AND A COMPLETED OUTAGE PERMIT ARE REQUIRED PRIOR TO CLOSING AN EXISTING SITE ROADWAY.

6. DUST CONTROL

SEE SUBPART 6 OF BID DOCUMENT FOR REQUIREMENTS.

7. ODOT ITEM 659, SEEDING AND MULCHING

PERMANENT SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS DISTURBED BY THE SUBCONTRACTOR. ALL COMMERCIAL FERTILIZER APPLICATION SHALL BE INCLUDED AS PART OF SEEDING AND MULCHING AND SHALL NOT BE PAID FOR SEPARATELY. BETWEEN MARCH 15th AND OCTOBER 15th, SEED MIXTURE (BY WEIGHT) SHALL BE:
40% KENTUCKY BLUEGRASS (POA PRATENSIS)
40% CREEPING RED FESCUE (FESTUCA RUBRA)
20% ANNUAL RYEGRASS (LOLIUM MULTIFLORUM),
SEEDING PERFORMED BETWEEN OCTOBER 15th AND TO MARCH 15th WILL BE CONSIDERED TEMPORARY SEEDING. WORK FOR TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH ODOT ITEM 207.

8. EARTHWORK

- PER ODOT ITEM 203
- STRIP TOP SOIL AND STOCKPILE SEPARATELY FOR REUSE. EXCESS DISPOSED OF PER FERMCO APPROVAL.
- ALL DEBRIS, WASTE, AND EXCESS SOIL TO BE HANDLED IN ACCORDANCE WITH STATEMENT OF WORK SUBPART 6 OF THE FERMCO CONTRACT DOCUMENT.
- COMPACT ALL FILL MATERIAL TO 95% STANDARD PROCTOR PER ASTM D698. MATERIAL IS TO BE WITHIN 3% OF OPTIMUM MOISTURE
- PROOFROLL SUBGRADE OF ROAD AREA FOR SOFT SPOTS PER ODOT ITEM 203.14. PROOFROLLING SHALL BE INCLUDED IN THE COST OF SUBGRADE COMPACTION.
- TESTING FREQUENCIES AND FIELD TESTING METHODS ARE SPECIFIED IN THE BID DOCUMENT.

9. UNLESS NOTED OTHERWISE, ALL WORK (MATERIAL AND LABOR) SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED 1/1/95.

10. CLEARING AND GRUBBING

- ALL TREES AND STUMPS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND CHIPPED. DISPOSE OF CHIPPED MATERIAL AT AREA ON SITE AS DIRECTED BY FERMCO.
- PAYMENT SHALL BE MADE ON A LUMP SUM BASIS IN ACCORDANCE WITH ODOT ITEM 201.

11. STEEL CASING PIPE

STEEL CASING PIPE SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS. THE ENDS OF THE PIPE SHALL BE WRAPPED IN PLASTIC TO KEEP DIRT AND DEBRIS OUT OF THE PIPE. THE ENDS OF THE PIPE SHALL BE MARKED WITH 2"X4" WOOD POST TO AID LOCATION OF THE PIPE FOR FUTURE USE. POST SHALL BE 3' ABOVE FINISH GRADE AND FLAGGED WITH ORANGE PLASTIC RIBBON.

NOTES 364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A	7/25/96

STATE OF OHIO — JAMES M. MCCLUP — E-61079 — REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/PO158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL GENERAL NOTES 61

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00181	G0002	0

ODOT ITEM	ODOT ITEM EXT.	DESCRIPTION	UNIT	BID QUANTITY
201	11000	CLEARING AND GRUBBING	L SUM	1
202	34900	PIPE REMOVED	LIN FT	75
203	12000	EXCAVATION NOT INCLUDING EMBANKMENT	CU YD	12,974
203	20000	EMBANKMENT	CU YD	10,655
203	50000	SUBGRADE COMPACTION	SQ YD	24,761
207	30000	FILTER FABRIC FENCE	LIN FT	8050
207	70000	STRAW OR HAY BALES	EACH	140
301	12000	BITUMINOUS AGGREGATE BASE, AC-10	CU YD	2695
304	20000	AGGREGATE BASE	CU YD	6423
402	20000	ASPHALT CONCRETE, AC-20	CU YD	674
404	20000	ASPHALT CONCRETE, AC-20	CU YD	678
408	10000	BITUMINOUS PRIME COAT	GAL	8084
601	28000	DUMPED ROCK FILL, TYPE D	CU YD	53
601	34300	ROCK CHANNEL PROTECTION TYPE D WITHOUT FILTER	CU YD	115
603	03100	10" CONDUIT, TYPE B	LIN FT	29
603	04400	12" CONDUIT, TYPE B	LIN FT	55
603	10400	24" CONDUIT, TYPE B	LIN FT	270
604	04900	CATCH BASIN, NO. 2-3	EACH	2
604	09911	CATCH BASIN, FRAME, AND GRATE, AS PER PLAN	EACH	15
606	13000	GUARDRAIL, TYPE 5	LIN FT	75
630	03100	GROUND MOUNTED SUPPORT, NO. 3 POST	LIN FT	290
630	80102	SIGN, FLAT SHEET, TYPE G	SQ FT	242
644	00100	EDGE LINE	MILE	1.15
644	00300	CENTER LINE	MILE	1.15
644	00500	STOP LINE	LIN FT	20
644	01000	RAILROAD SYMBOL MARKING	EACH	2
652	10000	PLACING STOCKPILED TOPSOIL	CU YD	3370
659	10000	SEEDING AND MULCHING	SQ YD	30,300
651	10000	TOPSOIL STOCKPILED	CU YD	3500
*		DUST CONTROL	L SUM	1
*		8" STEEL CASING PIPE, SCH 40	LIN FT	70
*		12" STEEL CASING PIPE, SCH 40	LIN FT	360
*		14" STEEL CASING PIPE, SCH 40	LIN FT	130
*		12" HDPE PIPE	LIN FT	245
*		NON-WOVEN GEOTEXTILE	SQ YD	24,251
*		12" FLARED END SECTION	EACH	2
*		24" FLARED END SECTION	EACH	6
		PEDESTRIAN BRIDGE	L SUM	1
*		ELECTRICAL	L SUM	1
*		K-65 TRENCH CROSSING	L SUM	1
*		PRECAST CONCRETE CATCH BASIN COVERS	EACH	5

NOTES 364

1. ITEMS INDICATED BY "*" ARE NOT STANDARD ODOT ITEMS AND ARE DETAILED IN THE PLAN DRAWINGS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A 7/25/96

STATE OF OHIO JOHN M. HACLUP E-046879 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

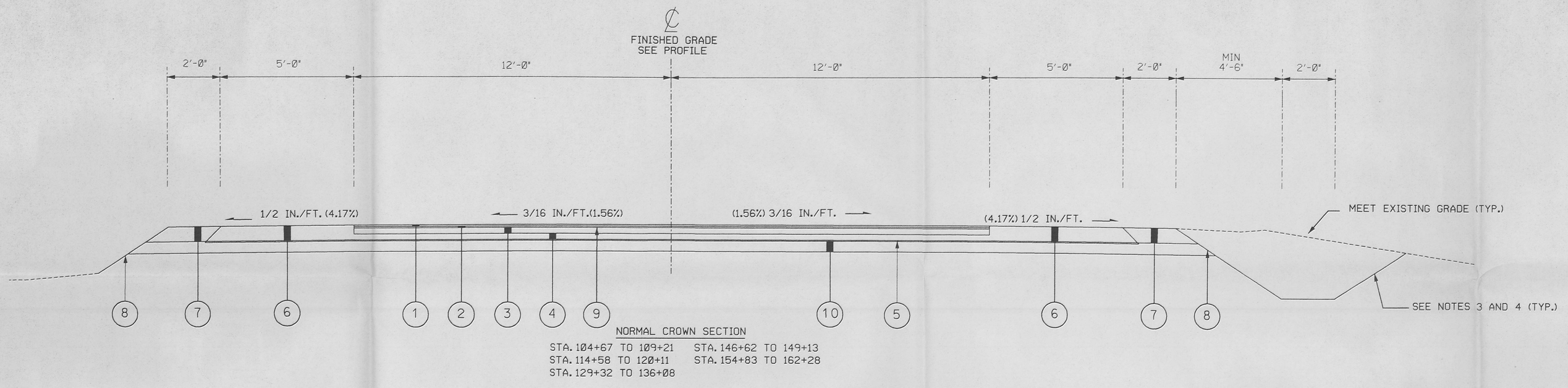
DRAWING TITLE
CIVIL GENERAL SUMMARY 62

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

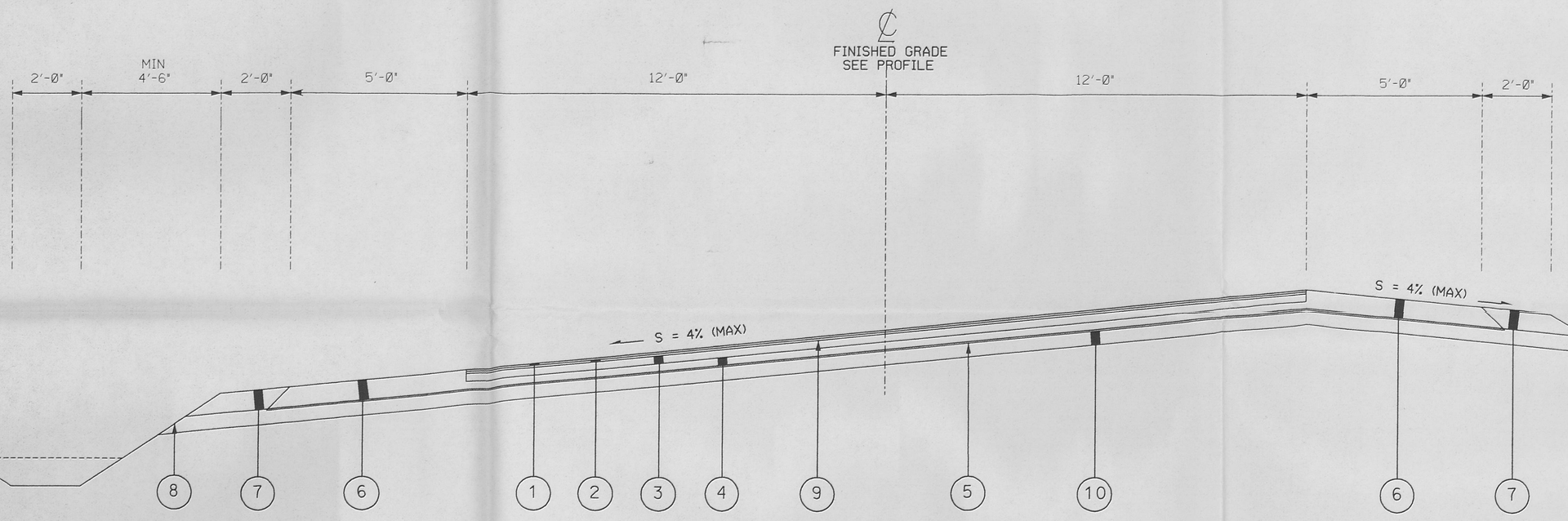
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00182	G0003	0



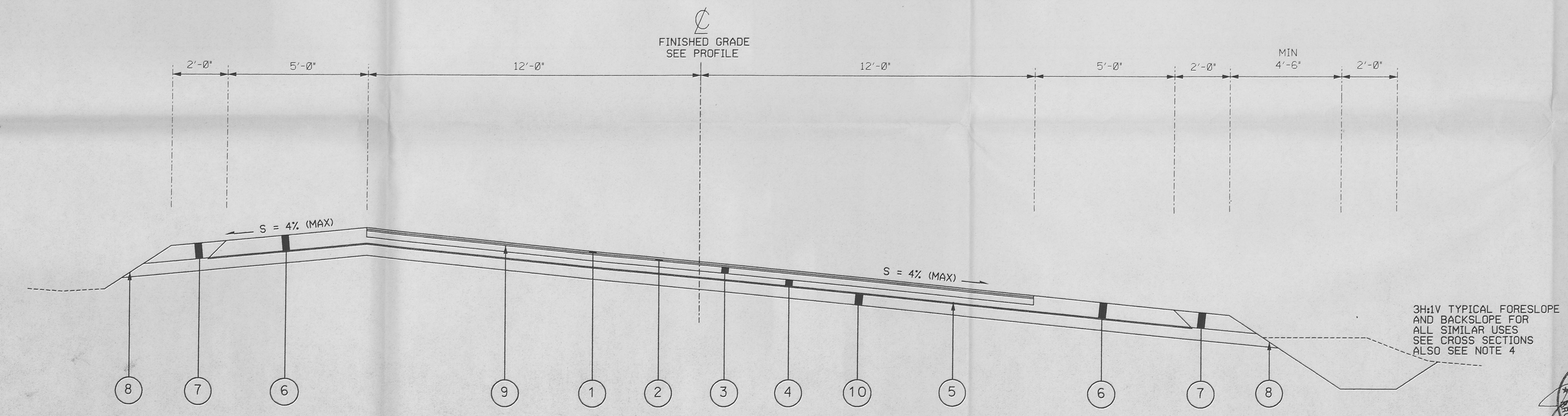
NORMAL CROWN SECTION

STA. 104+67 TO 109+21
STA. 114+58 TO 120+11
STA. 129+32 TO 136+08
STA. 146+62 TO 149+13
STA. 154+83 TO 162+28



SUPERELEVATED SECTION - LEFT

STA. 120+11 TO 124+42
STA. 136+08 TO 138+36
STA. 143+08 TO 146+62



SUPERELEVATED SECTION - RIGHT

STA. 99+95.14 TO 104+67
STA. 109+21 TO 114+58
STA. 126+20 TO 129+32
STA. 138+36 TO 143+08
STA. 149+13 TO 154+83

NOTES

1. MAKE TRANSITION TO EXISTING CROSS SECTION AT STA 99+95.14 (AS SHOWN ON DRAWING 92X-5900-G-00185, FOR CROSS SECTION, SEE DRAWING 92X-5900-G-00191).
2. SEE DRAWING 92X-5900-G-00203 FOR SUPERELEVATION TABLES. STATIONS SHOWN FOR SUPERELEVATED SECTIONS INCLUDE TRANSITION. THE SUPERELEVATION TRANSITION IS DEVELOPED BY ROTATING PAVEMENT ABOUT THE CENTERLINE.
3. SEE PLAN AND PROFILE AND CROSS SECTION SHEETS FOR DETAILS OF GRADING AND DRAINAGE.
4. IN ORDER TO AVOID CONFLICTS WITH EXISTING FEATURES AND UTILITIES, LOCALIZED CHANGES IN SIDE SLOPES AND DITCH WIDTH MAY BE REQUIRED IN ORDER TO CONSTRUCT THE ROAD AND ITS DRAINAGE SYSTEM. ANY CHANGES TO BE COORDINATED WITH FERMCO.

LEGEND

1. 1-1/2" ASPHALT CONCRETE (AC-20) SURFACE COURSE (ODOT ITEM 404)
2. 1-1/2" ASPHALT CONCRETE (AC-20) INTERMEDIATE COURSE (ODOT ITEM 402)
3. 6" BITUMINOUS AGGREGATE BASE (ODOT ITEM 301)
4. 6" AGGREGATE BASE (ODOT ITEM 304)
5. NON-WOVEN GEOTEXTILE (ODOT ITEM 712.09 TYPE D)
6. AGGREGATE SHOULDER (ODOT ITEM 304)
7. EMBANKMENT (ODOT ITEM 203)
8. SEEDING AND MULCHING (ODOT ITEM 659) SEE DRAWING 92X-5900-G-00181
9. BITUMINOUS PRIME COAT (ODOT ITEM 408) APPLIED AT THE RATE OF 0.5 GAL / SQ. YD.
10. SUBGRADE COMPACTION 12" (ODOT ITEM 203)

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00181	GENERAL NOTES
92X-5900-G-00185	PLAN AND PROFILE - SHEET 1 OF 5
92X-5900-G-00191	CROSS SECTIONS - SHEET 1 OF 6
92X-5900-G-00203	SUPERELEVATION TABLES

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMH	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

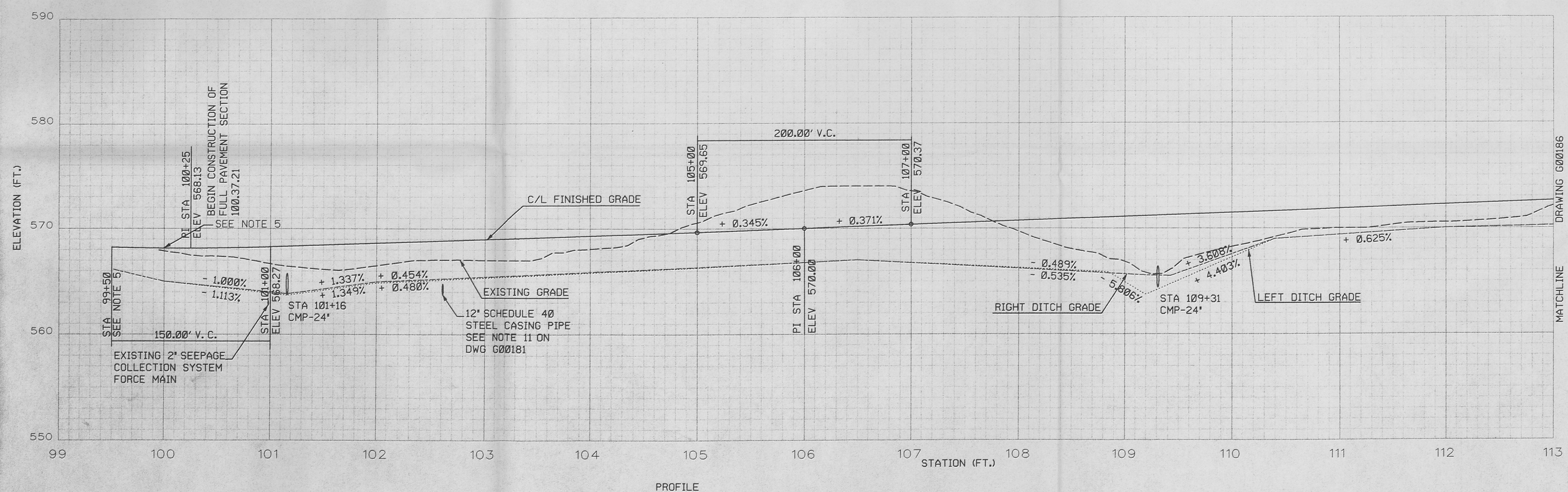
PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TYPICAL SECTIONS 63

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE 1"=2'H 1"=4'V	CLASS
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
A-E 7/25/96 DATE		N/A DATE		20410	

STATE OF OHIO JOHN M. HOLLY E-046579 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00184	G0004	0



PROFILE
1" = 5'- 0" VERTICAL 1" = 50'- 0" HORIZONTAL

NOTES

364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.
2. LOCATION OF UTILITES IS ESTIMATED. ALL UTILITY LOCATIONS AND DETAILS SHALL BE VERIFIED IN THE FIELD.
3. FOR CROSS SECTIONS, SEE DRAWINGS 92X-5900-G-00191 AND 92X-5900-G-00192.
4. FOR LOCATION AND ELEVATION OF STORM DRAINS, SEE DRAWING 92X-5900-G-00210.
5. AT THE START OF THE HAUL ROAD (STA 99+95.14) THE EXISTING GRAVEL ROAD MEETS THE PAVEMENT AT APPROXIMATELY A -3% GRADE. THE CONTRACTOR WILL REGRADE THE GRAVEL TO ACCOMMODATE A 150 FT. VERTICAL CURVE (PVI AT STA 100+25). THE CURVE IS SHOWN ON THE PLANS, BUT WILL BE VERIFIED AND SET IN THE FIELD AS DIRECTED BY FERMCO TO MEET EXISTING SITE CONDITIONS.

   THE PROPOSED HAUL ROAD LEFT EDGE OF PAVEMENT WILL MATCH THE LEFT EDGE OF THE EXISTING GRAVEL ROAD. THE EDGES WILL BE TAPERED AT 11:1 TO MEET THE EXISTING GRAVEL ROAD.
6. EXISTING WELLS TO REMAIN. SUBCONTRACTOR SHALL PROTECT THE WELLS AND ADJUST DITCH TO FIELD CONDITION.
7. FULL WIDTH ASPHALT SECTION BEGINS AT STA 100+37.21. TAPER AT 11:1 WITH GRAVEL TO MEET EXISTING GRAVEL ROAD.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00181	GENERAL NOTES
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5
92X-5900-G-00191	CROSS SECTIONS - SHEET 1 OF 6
92X-5900-G-00192	CROSS SECTIONS - SHEET 2 OF 6
92X-5900-G-00210	DRAINAGE SUBSUMMARY

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 1 OF 5

64

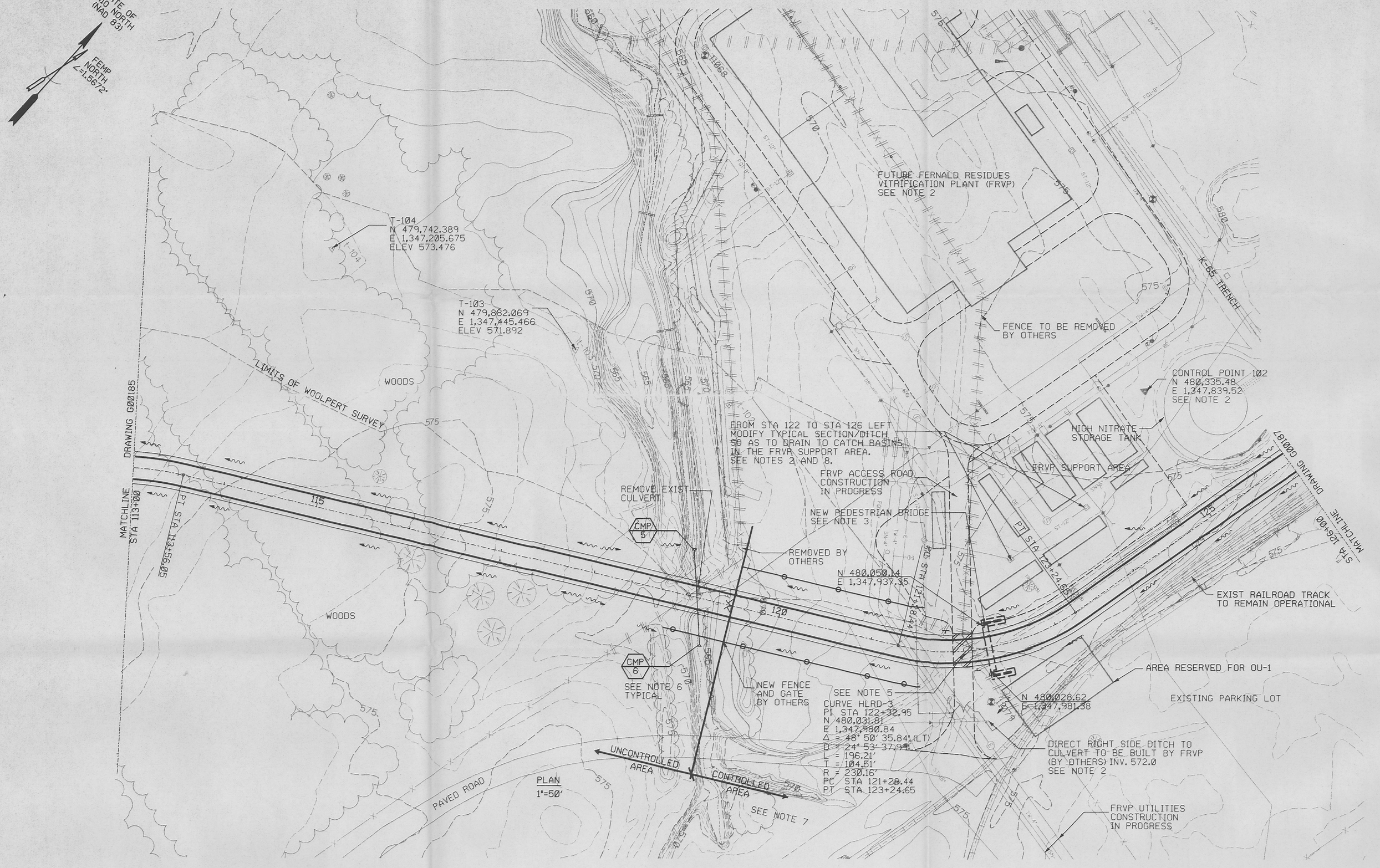
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

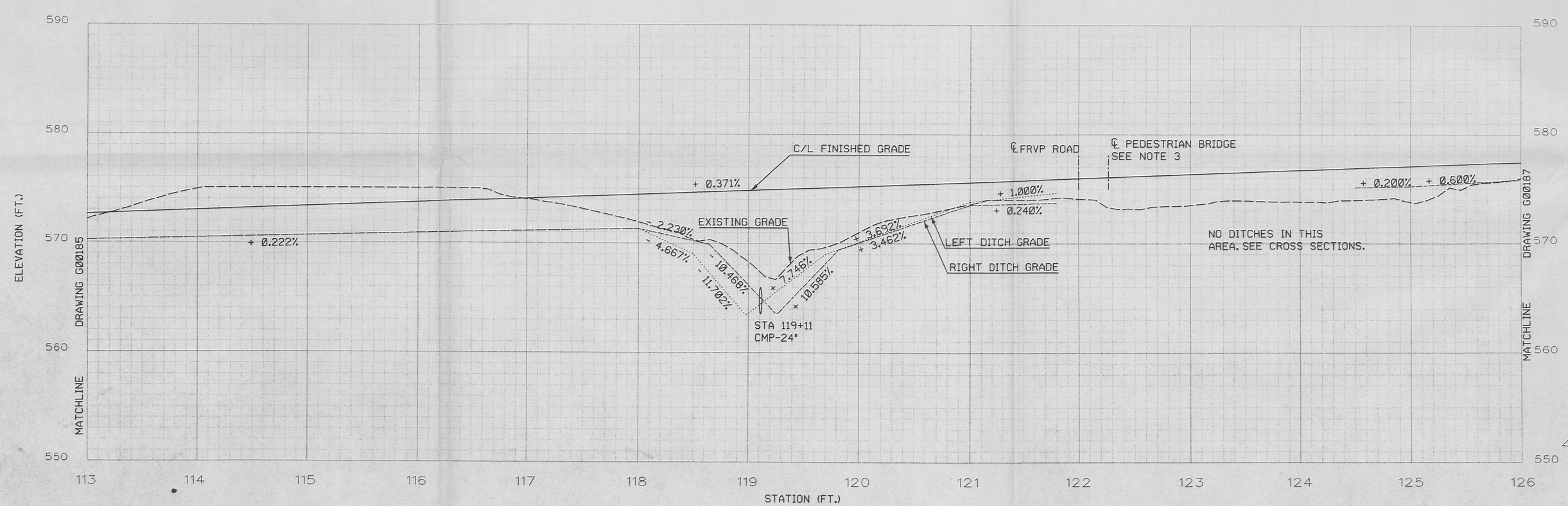
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		AS SHOWN	

SUBMITTED FOR APPROVAL	FERMCO QRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

STATE OF OHIO JAMES M. UHLENHAKE E-066379 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE/PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-9701	92X-5900-G-00185	G0005	0





PROFILE

1" = 5'- 0" VERTICAL 1" = 50'- 0" HORIZONTAL

NOTES

364

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.
2. THE FUTURE OU-4 FERNALD RESIDUES VITRIFICATION PLANT INFORMATION IS TAKEN FROM CERTIFIED FOR CONSTRUCTION DRAWINGS. SUBCONTRACTOR SHALL COORDINATE WORK AND ANY ADJUSTMENTS WITH FERMCO.
3. FOR DETAILS OF THE PEDESTRIAN BRIDGE SEE DRAWING 92X-5900-S-00334.
4. FOR CROSS SECTIONS, SEE DRAWINGS 92X-5900-G-00192 AND 92X-5900-G-00193.
5. SUBCONTRACTOR TO SAW CUT AND REMOVE PAVEMENT INSTALLED FOR FERNALD RESIDUES VITRIFICATION PLANT (FVRP) IN THE AREA SHOWN AND CONSTRUCT THE HAUL ROAD TYPICAL ROADWAY PAVEMENT SECTION AS SHOWN ON THESE DRAWINGS (PAVEMENT REMOVAL WILL NOT BE PAID FOR SEPARATELY). TRANSITION FROM EDGE OF ROADWAY TO MEET EXISTING FRVP ACCESS DRIVE WITH ODOT ITEM 404. SUBCONTRACTOR SHALL COORDINATE WORK WITH FERMCO. WORK IS INCENDENTIAL TO EXCAVATION ITEM. SEE CROSS SECTION AT STA. 122+00 ON DRAWING 92X-5900-G-00192.
6. FOR LOCATION AND ELEVATION OF STORM DRAINS, SEE DRAWING 92X-5900-G-00210.
7. SEE BID DOCUMENT FOR CONTROLLED AREA AND UNCONTROLLED AREA REQUIREMENTS.
8. DUE TO THE INTEGRATION OF WORK FOR OTHER PROJECTS IN THIS AREA WHICH ARE CURRENTLY UNDER DESIGN OR CONSTRUCTION, ADJUSTMENTS TO THE DRAINAGE DESIGN FOR THE HAUL ROAD WILL BE REQUIRED AS THE DESIGN AND CONSTRUCTION OF THE ADJACENT PROJECTS PROCEEDS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00185	PLAN AND PROFILE - SHEET 1 OF 5
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00192	CROSS SECTIONS - SHEET 2 OF 6
92X-5900-G-00193	CROSS SECTIONS - SHEET 3 OF 6
92X-5900-G-00210	DRAINAGE SUBSUMMARY
92X-5900-S-00334	FRAMING PLAN & ELEVATIONS - PEDESTRIAN BRIDGE

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 2 OF 5

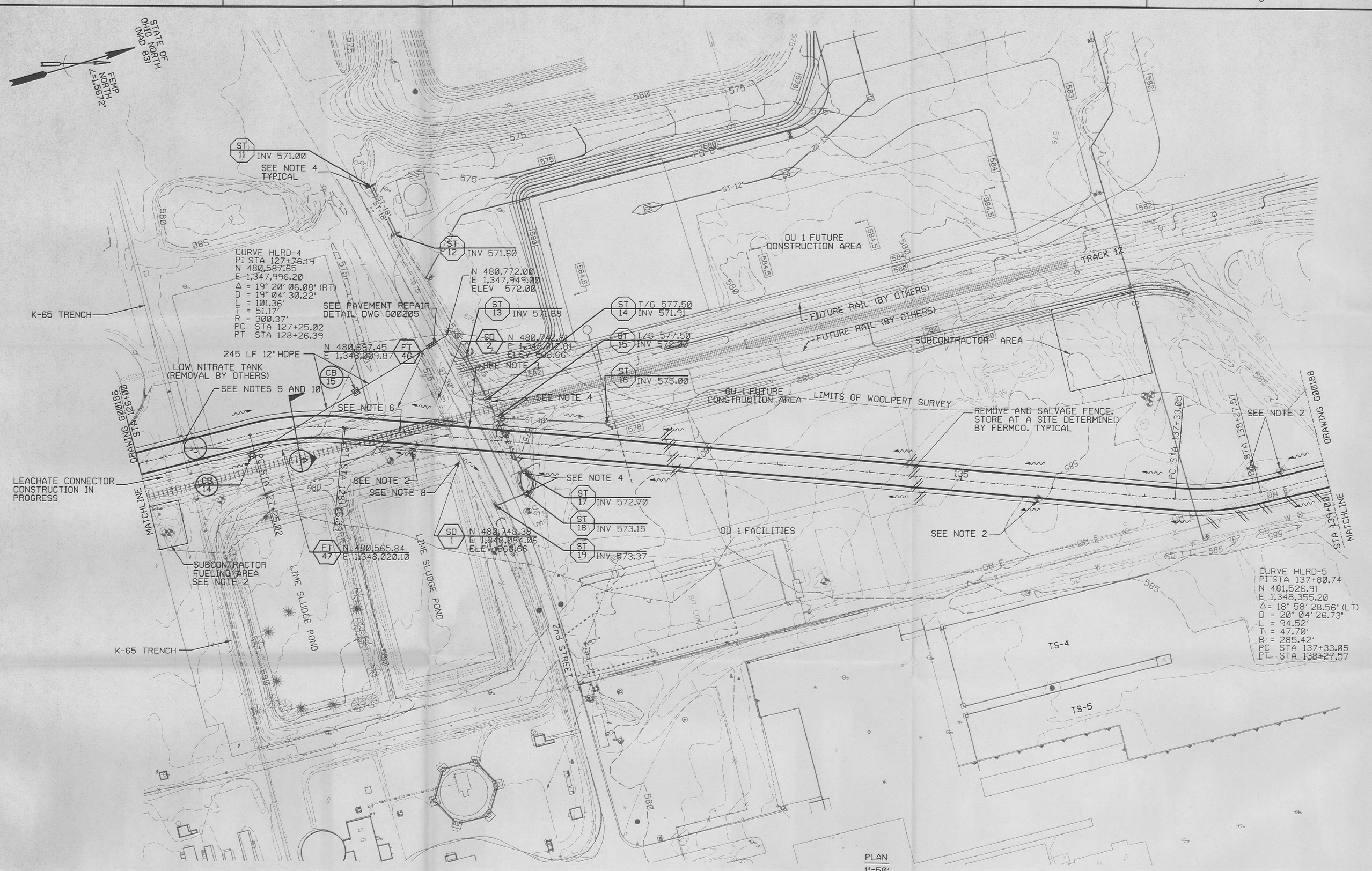
65

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO. | FLOOR | SCALE: AS SHOWN | CLASS

SUBMITTED FOR APPROVAL: A-E DATE 7/25/96 | FERMCO CRU APPROVAL: N/A DATE | FERMCO PROJECT NUMBER: 20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00186	G0006	0



NOTES 36H

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.
2. EXISTING MONITORING WELLS TO BE ABANDONED BY FERMCO.
3. FOR DETAILS OF THE 2nd STREET CROSSING, SEE DRAWING 92X-5900-G-00199.
4. STORM DRAINAGE AND IMPROVEMENTS CONSTRUCTION BY OTHERS. INFORMATION SHOWN FROM CFC DRAWINGS.
5. FOR DETAILS OF THE K-65 TRENCH CROSSING SEE DRAWING 92X-5900-S-00337.
6. FOR DETAILS OF THE RAILROAD CROSSING, SEE DRAWING 91X-5900-G-00230. WORK BY OTHERS. DRAWING FURNISHED BY FERMCO UPON REQUEST. ADJUST TYPICAL SECTION TO MATCH EDGE OF CROSSING.
7. INSTALL 1-14" AND 2-12" SCHEDULE 40 STEEL CASINGS FOR FUTURE UTILITIES. THE 14" CASING IS FOR FT-46/FT-47.
8. INSTALL 1-8" SCHEDULE 40 STEEL CASING FOR FUTURE UTILITY.
9. 47' LF GUARDRAIL ODOT TYPE 5. 13' FROM CENTER LINE TO FACE. CENTER GUARDRAIL ON CENTER OF K-65 TRENCH.
10. TRANSITION FROM TYPICAL CROSS SECTION TO MATCH THE STEEL COVER ELEVATION OF THE K-65 TRENCH CROSSING 100' EACH SIDE. (WORK IN CONJUNCTION WITH SUPERELEVATION.)
11. DUE TO THE INTEGRATION OF WORK FOR OTHER PROJECTS IN THIS AREA WHICH ARE CURRENTLY UNDER DESIGN OR CONSTRUCTION, ADJUSTMENTS TO THE DRAINAGE DESIGN FOR THE HAUL ROAD WILL BE REQUIRED AS THE DESIGN AND CONSTRUCTION OF THE ADJACENT PROJECTS PROCEEDS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5
92X-5900-G-00188	PLAN AND PROFILE - SHEET 4 OF 5
92X-5900-G-00193	CROSS SECTIONS - SHEET 3 OF 6
92X-5900-G-00194	CROSS SECTIONS - SHEET 4 OF 6
92X-5900-G-00199	INTERSECTION DETAIL
92X-5900-G-00205	GENERAL DETAILS - SHEET 2 OF 2
92X-5900-G-00210	DAINAGE SUBSUMMARY
92X-5900-S-00337	FOUNDATION PLAN, SECTIONS AND DETAILS - K-65 UTILITY TRENCH ROAD CROSSING
92X-5900-G-00232	RAILROAD DETAILS - SHEET 1 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 3 OF 5

66

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		AS SHOWN	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20410

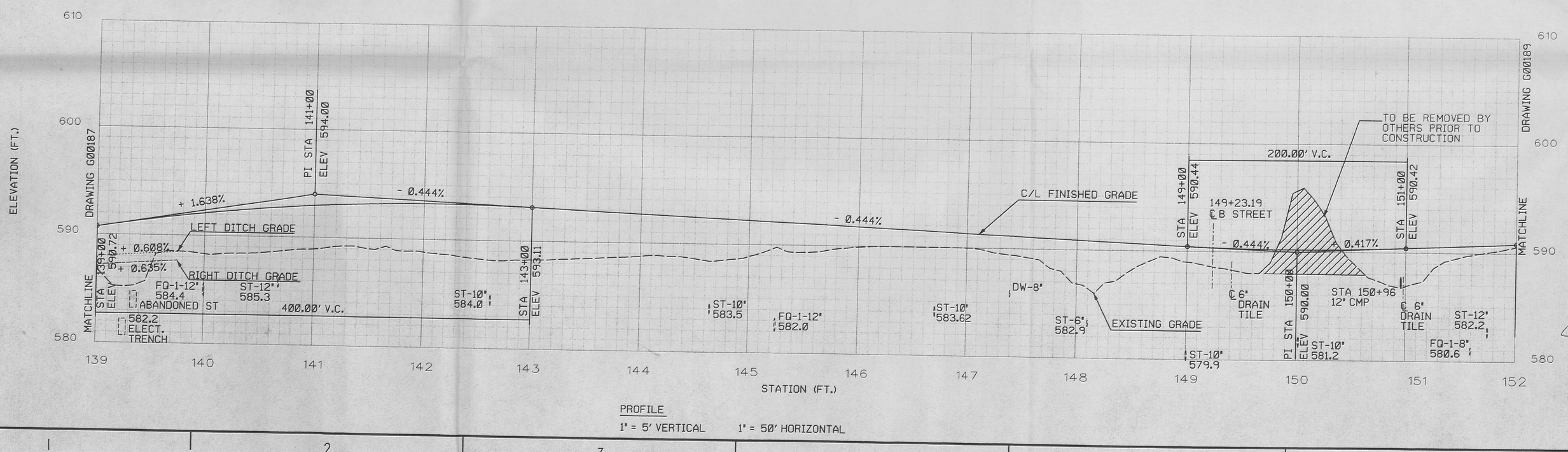
DOE PROJECT NO.	TEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00187	G0007	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
OU2/P0158

STATE OF OHIO JAMES W. HASLUP E-046579 REGISTERED PROFESSIONAL ENGINEER

CATCH BASIN SCHEDULE				
NO.	NORTHING	EASTING	TOP OF GRATE	INV
1	481,808.82	1,348,404.97	588.60	585.7
2	481,767.32	1,348,632.28	587.00	583.9
3	481,836.23	1,348,634.12	588.50	584.5
4	481,761.86	1,348,831.97	587.50	583.4
5	481,825.80	1,348,836.32	589.00	584.2
6	481,862.15	1,349,036.46	588.00	583.8
7	481,847.54	1,349,261.30	588.15	580.2
8	481,906.04	1,349,262.85	588.90	581.0
9	481,868.71	1,349,358.63	587.50	579.8
10	481,930.60	1,349,361.44	587.00	581.0
11	481,963.44	1,349,959.81	591.00	584.0
12	481,968.66	1,350,088.13	588.80	585.1
13	481,984.50	1,350,242.08	590.00	585.1
14	480,532.56	1,348,016.19	588.80	585.1
15	480,659.44	1,347,980.50	590.00	585.1

FOR DETAIL SEE DWG G00204.
CATCH BASINS 14 AND 15 ARE ODOT STANDARD CB 2-3.



PROFILE
1" = 5' VERTICAL 1" = 50' HORIZONTAL

NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.
2. THESE RAILROAD SPURS ARE TO BE REMOVED AS PART OF THIS CONTRACT. SEE BID DOCUMENT FOR REQUIREMENTS.
3. FOR CROSS SECTIONS, SEE DRAWINGS 92X-5900-G-00194 AND 92X-5900-G-00195.
4. THE INTERSECTION SHALL MEET THE PROPOSED HAUL ROAD GRADE VIA A 50 FOOT ASPHALT CONCRETE TRANSITION WHICH WILL MATCH THE EXISTING INTERSECTION WIDTHS (NOMINALLY 20 FT.). NO RADII SHALL BE INCLUDED.
5. MODIFY EXISTING RIP-RAP AND CONCRETE CURB AND GUTTER TO DRAIN TO THE EAST OR WEST. REMOVE EXCESS STONE AND CONCRETE AND PLACE IN 3RD STREET SOIL AND RUBBLE PILE AT THE ROCK BERM ON THE EAST SIDE.
6. FIRE HYDRANTS AND UTILITY POLES TO BE REMOVED AND RELOCATED BY FERMCO.
7. EXISTING FENCES AND OTHER FEMP MATERIAL ARE TO BE REMOVED OR RELOCATED 40' MINIMUM FROM HAUL ROAD CENTERLINE BY FERMCO.
8. EXISTING CATCH BASIN MANHOLE TO BE COVERED WITH A PRECAST SLAB, 3,000 PSI, 2'x2'x8" WITH LIFTING LOOPS. EXISTING GRATE TO BE SALVAGED AND STOCKPILED AS DIRECTED BY FERMCO. BACKFILL OVER SLAB TO PROPOSED GRADE.
9. THE HAUL ROAD DRAINAGE EAST OF THE PRODUCTION AREA FENCE, VICINITY STATION 139+80 IS TO PROVIDE POSITIVE DRAINAGE TO CATCH BASINS WITH THE MINIMUM AMOUNT OF EARTHWORK POSSIBLE. MINOR PONDING OF RUNOFF IS PERMITTED, SUBJECT TO FERMCO APPROVAL.
10. NEW CATCH BASINS ARE TO BE 3' CLEAR OF EXISTING UNDERGROUND UTILITIES. ADJUST ROAD SIDE SLOPES AS NECESSARY.
11. SUBCONTRACTOR SHALL FIELD VERIFY INVERT ELEVATION AT EACH NEW CATCH BASIN AND CHECK TO DETERMINE IF THE PROPOSED TOP ELEVATION WILL HAVE POSITIVE DRAINAGE. ANY DEVIATION SHALL BE BROUGHT TO THE ATTENTION OF FERMCO AND RESOLVED PRIOR TO FABRICATION OF THE CATCH BASINS.
12. SEE BID DOCUMENT FOR CONTROLLED AREA AND CONTAMINATION AREA REQUIREMENTS.

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00189	PLAN AND PROFILE - SHEET 5 OF 5
92X-5900-G-00194	CROSS SECTIONS - SHEET 4 OF 6
92X-5900-G-00195	CROSS SECTIONS - SHEET 5 OF 6
92X-5900-G00204	GENERAL DETAILS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 4 OF 5

67

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/24/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO. | FLOOR | SCALE: AS SHOWN | CLASS

SUBMITTED FOR APPROVAL | FERMCO CRU APPROVAL: N/A DATE | FERMCO PROJECT NUMBER: 20410

DOE PROJECT NO. | FEMP PROJECT NO.: WBS 1.1.1.1.2.3.6 00-90701 | DRAWING INDEX CODE NO.: 92X-5900-G-00188 | SHEET NO.: G0008 | REV. NO.: 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: 0U2/P0158

STATE OF OHIO — E-046579 — REGISTERED PROFESSIONAL ENGINEER

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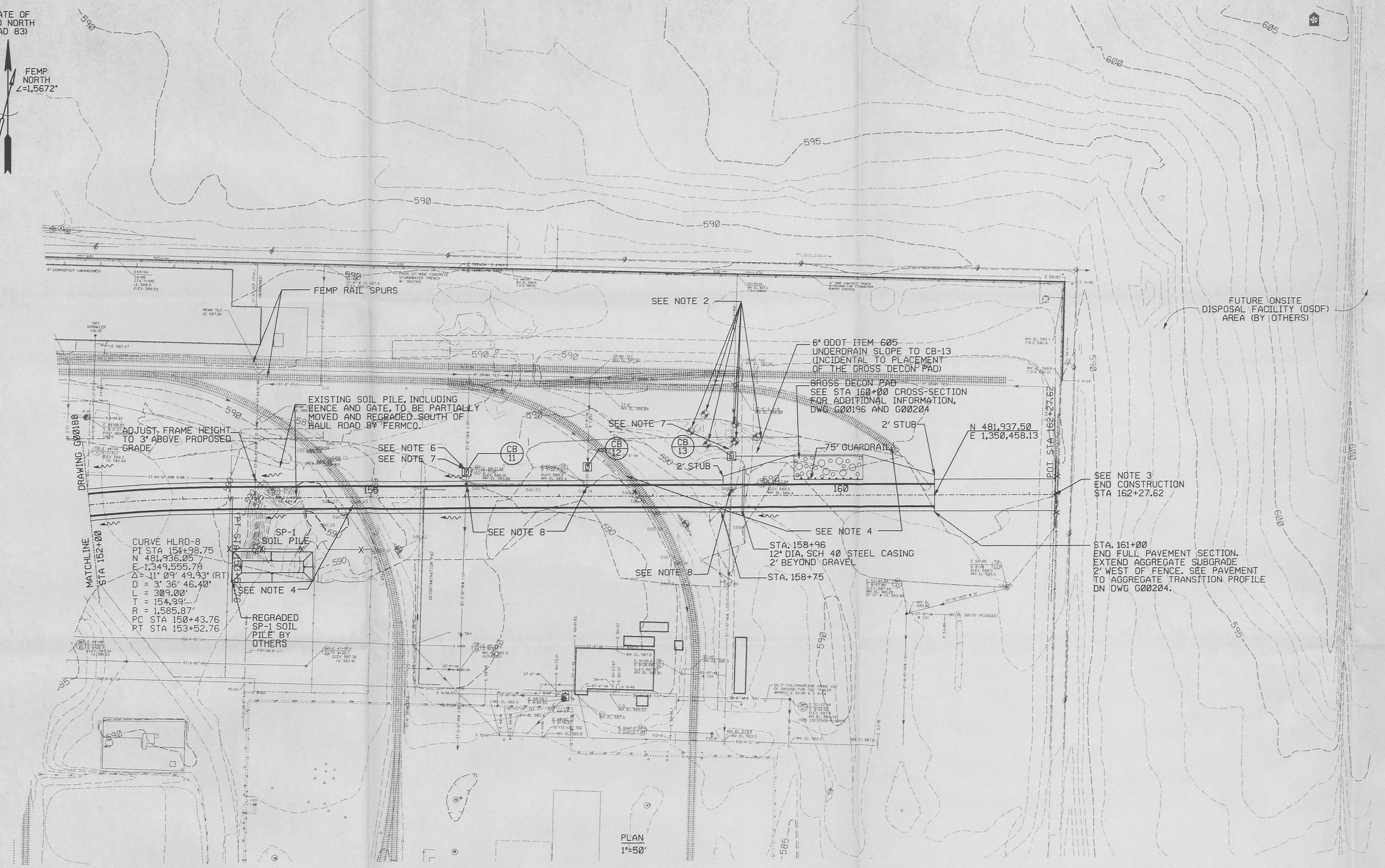
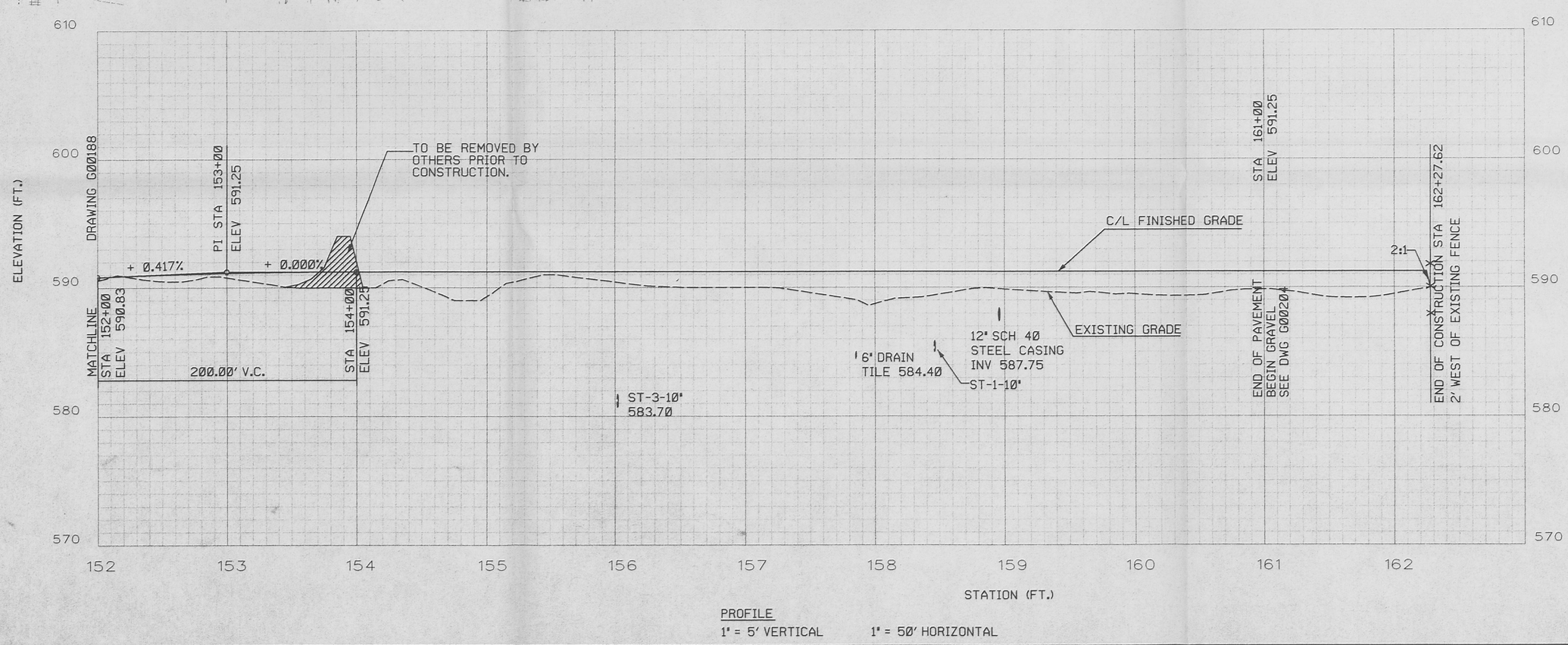




NOTES

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS WERE PREPARED USING DATA FROM THE DOCUMENTS LISTED BELOW.
   PARSONS TOPOGRAPHY 1992
   FEMP CADD GRID/UTILITY DRAWINGS
   FEMP SUBCONTRACTOR PROJECT DESIGN DOCUMENTS
   WOOLPERT FIELD SURVEY 11/95.
2. EXISTING MONITORING WELLS TO BE ABANDONED BY FERMCO.
3. END OF HAUL ROAD CONSTRUCTION AND TIE INTO ONSITE DISPOSAL FACILITY BY OTHERS.
4. THESE RAILROAD SPURS ARE TO BE REMOVED AS PART OF THIS CONTRACT. SEE BID DOCUMENT FOR REQUIREMENTS.
5. FOR CROSS SECTIONS, SEE DRAWINGS 92X-5900-G-00195 AND 92X-5900-G-00196.
6. FIRE HYDRANTS AND UTILITY POLES TO BE REMOVED AND RELOCATED BY OTHERS.
7. FOR CATCH BASIN SCHEDULE SEE DRAWING 92X-5900-G-00188.
8. EXISTING CATCH BASIN MANHOLE TO BE COVERED WITH A PRECAST SLAB, 3,000 PSI, 2'x2'x8' WITH LIFTING LOOPS. EXISTING GRATE TO BE SALVAGED AND STOCKPILED AS DIRECTED BY FERMCO. BACKFILL OVER SLAB TO PROPOSED GRADE.
9. THE HAUL ROAD DRAINAGE EAST OF THE PRODUCTION AREA FENCE, VICINITY STATION 139+80 IS TO PROVIDE POSITIVE DRAINAGE TO CATCH BASINS WITH THE MINIMUM AMOUNT OF EARTHWORK, WHERE POSSIBLE. MINOR PONDING OF RUNOFF IS PERMITTED, SUBJECT TO FERMCO APPROVAL.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00188	PLAN AND PROFILE - SHEET 4 OF 5
92X-5900-G-00195	CROSS SECTIONS - SHEET 5 OF 6
92X-5900-G-00196	CROSS SECTIONS - SHEET 6 OF 6
92X-5900-G-00204	GENERAL DETAILS - SHEET 1 OF 4

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 5 OF 5

68

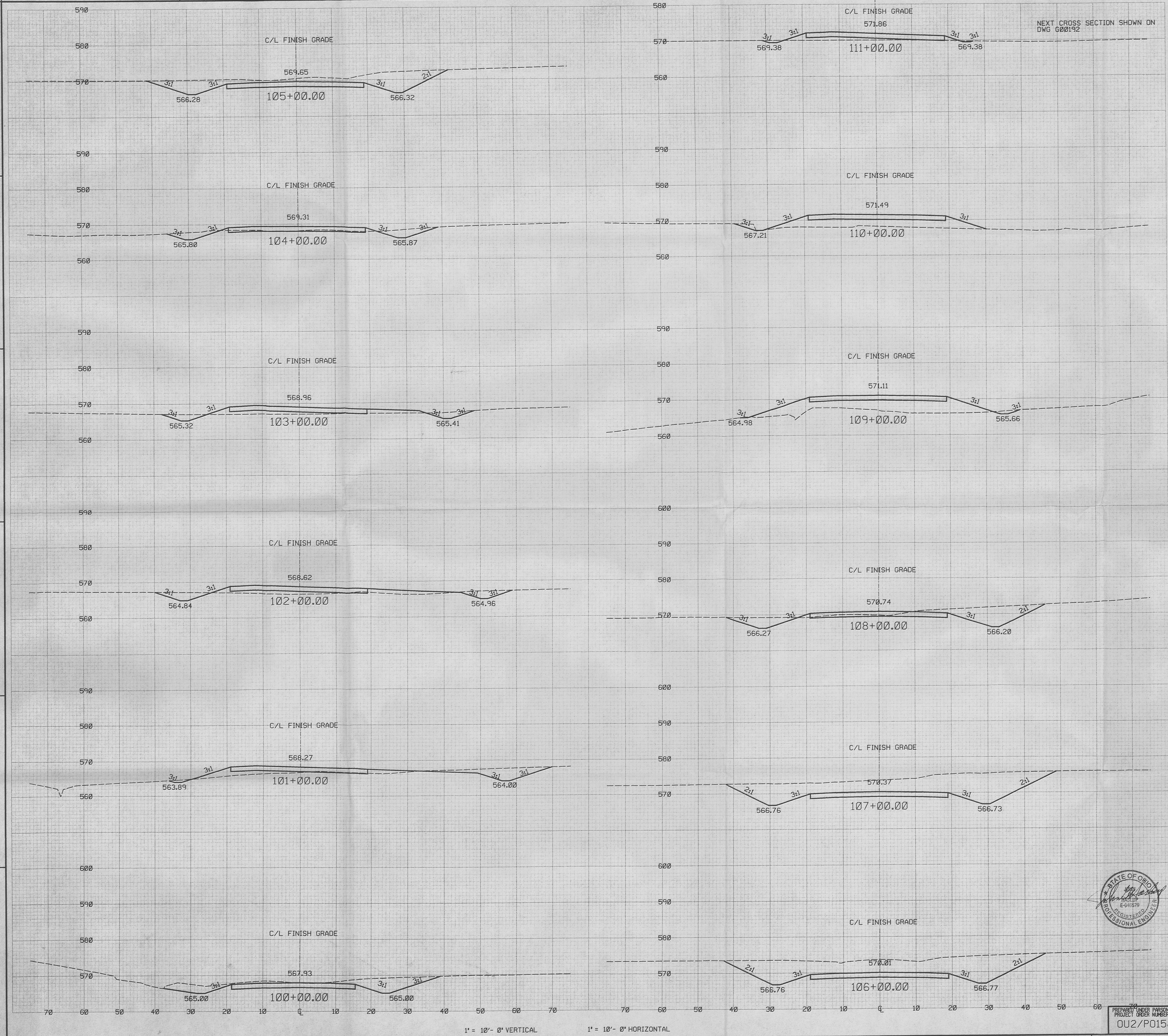
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		AS SHOWN	

SUBMITTED FOR APPROVAL (A-E)	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
JMW 7/25/96 DATE	N/A DATE	20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00189	G0009	0

STATE OF OHIO JOHN M. WOOLPERT E-040579 REGISTERED PROFESSIONAL ENGINEER



NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00185.
3. UNLESS OTHERWISE NOTED PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. DITCH BACK SLOPES IN CUTS GREATER THAN 5 FEET SHALL BE 2:1.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00185	PLAN AND PROFILE - SHEET 1 OF 5
92X-5900-G-00192	CROSS SECTIONS - SHEET 2 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION

DRAWING TITLE: CIVIL CROSS SECTIONS SHEET 1 OF 6

69

STATE OF OHIO ... E-046570 REGISTERED PROFESSIONAL ENGINEER

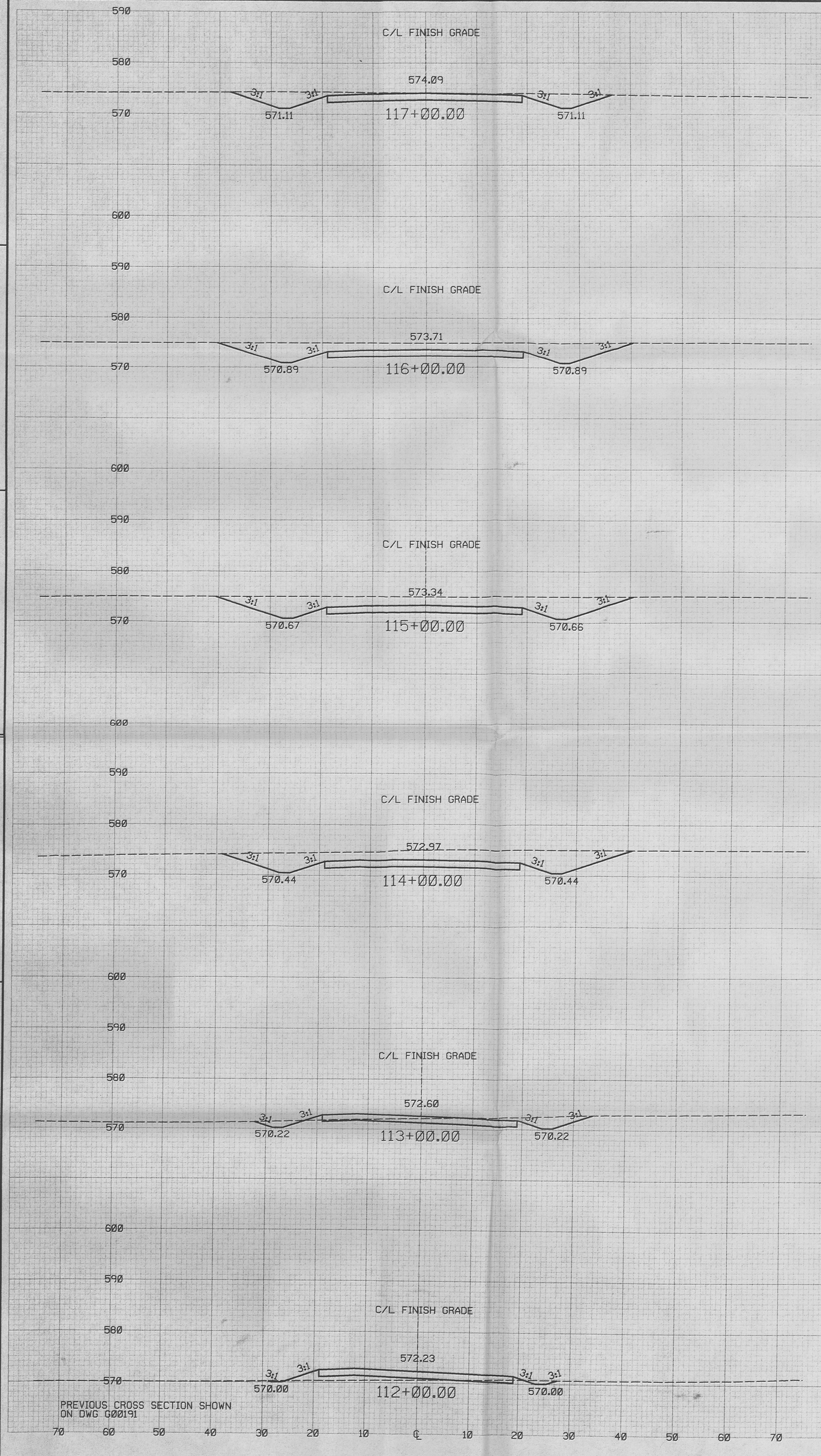
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95	[signature]	7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO. | FLOOR | SCALE 1" = 10' | CLASS

SUBMITTED FOR APPROVAL: [signature] DATE 7/25/96 | FERMCO CRU APPROVAL: N/A DATE | FERMCO PROJECT NUMBER: 20410

DOE PROJECT NO.	TEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.12.3.6 00-90701	92X-5900-G-00191	G0010	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158



1" = 10' - 0" VERTICAL

1" = 10' - 0" HORIZONTAL

NOTES

364

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00185 AND 92X-5900-G-00186.
3. PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. DITCH BACK SLOPES IN CUTS GREATER THAN 5 FEET SHALL BE 2:1.
5. THE FOLLOWING APPLIES AT STA. 122+00 FOR THE HAUL RD. INTERSECTION WITH THE FERNALD RESIDUES VITRIFICATION PLANT (FRVP) CROSSING:

   FROM 17' LEFT TO 60' RIGHT TRANSITION FROM EDGE OF SHOULDER TO MEET FRVP ROADWAY WITH ODOT ITEM 404 ASPHALT CONCRETE.

   SHOULDER PAVEMENT SECTION TO MATCH ROADWAY FOR THE WIDTH OF FRVP ROADWAY.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00185	PLAN AND PROFILE - SHEET 1 OF 5
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5
92X-5900-G-00191	CROSS SECTIONS - SHEET 1 OF 6
92X-5900-G-00193	CROSS SECTIONS - SHEET 3 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 2 OF 6

70

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

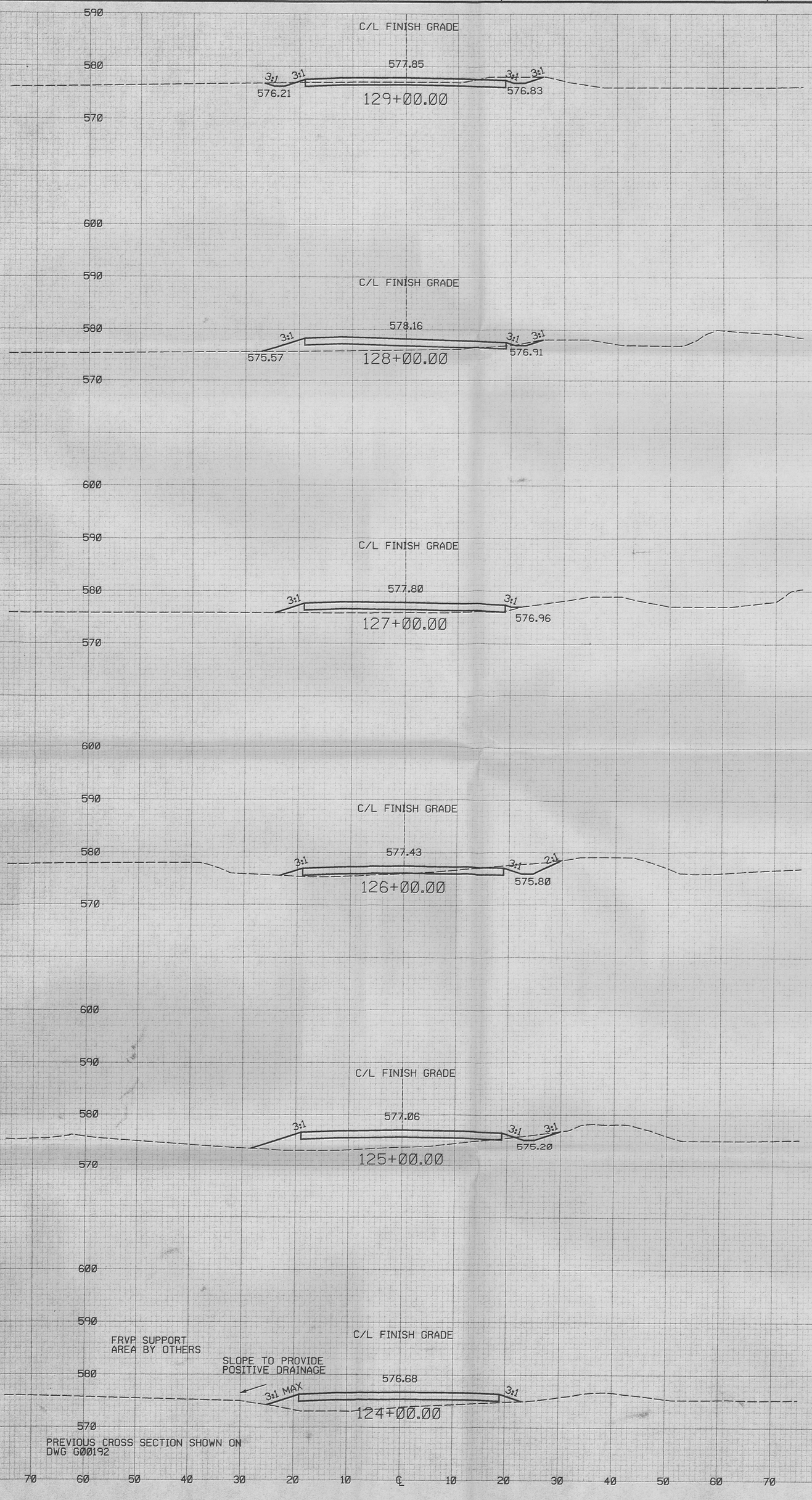
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

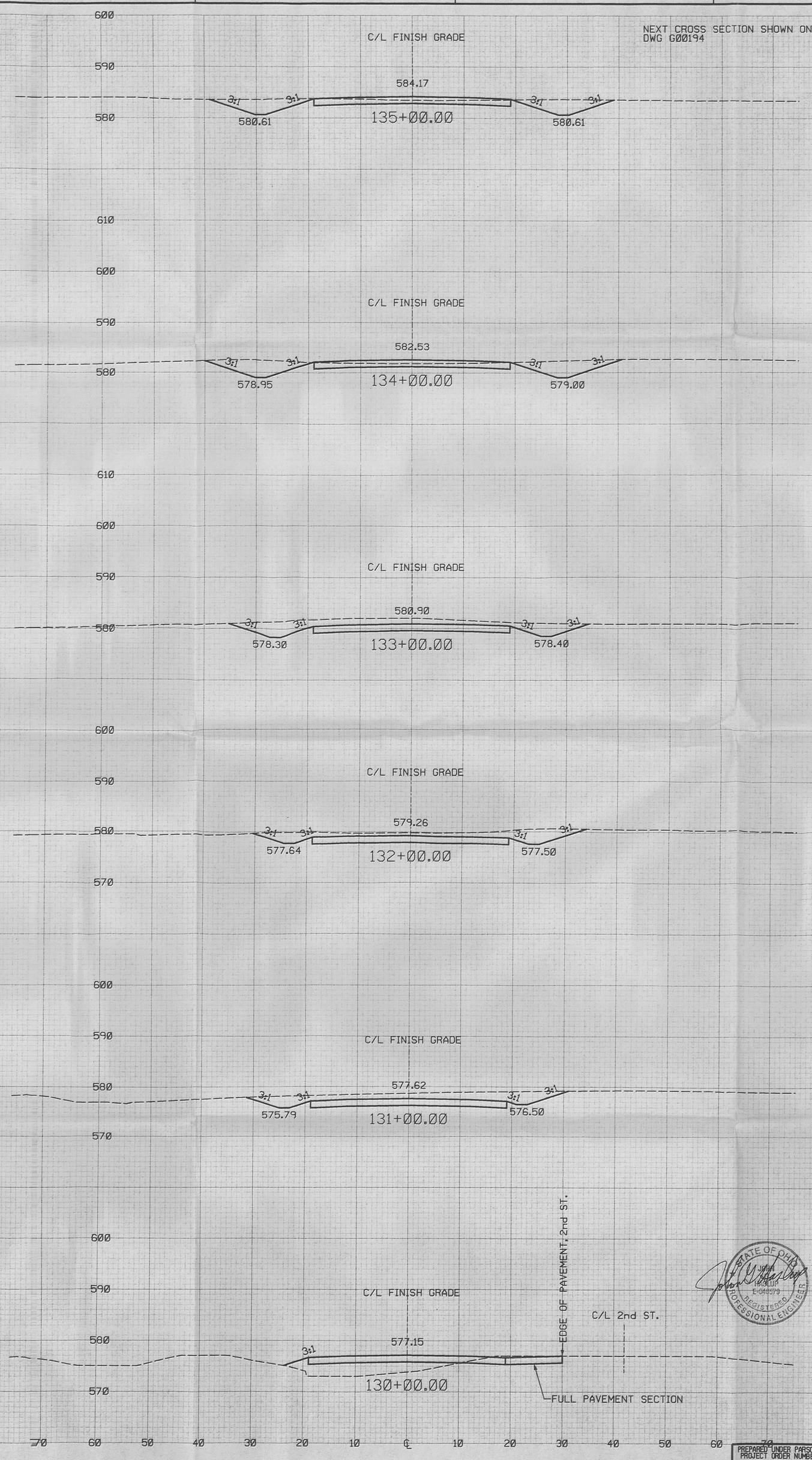
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00192	G0011	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
OU2/P0158

STATE OF OHIO — JAMES M. UTLEY — REGISTERED PROFESSIONAL ENGINEER — E-048579





1" = 10' - 0" VERTICAL 1" = 10' - 0" HORIZONTAL

NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00186 AND 92X-5900-G-00187.
3. PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. DITCH BACK SLOPES IN CUTS GREATER THAN 5 FEET SHALL BE 2:1.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00192	CROSS SECTIONS - SHEET 2 OF 6
92X-5900-G-00194	CROSS SECTIONS - SHEET 4 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMA	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 3 OF 6

7/

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

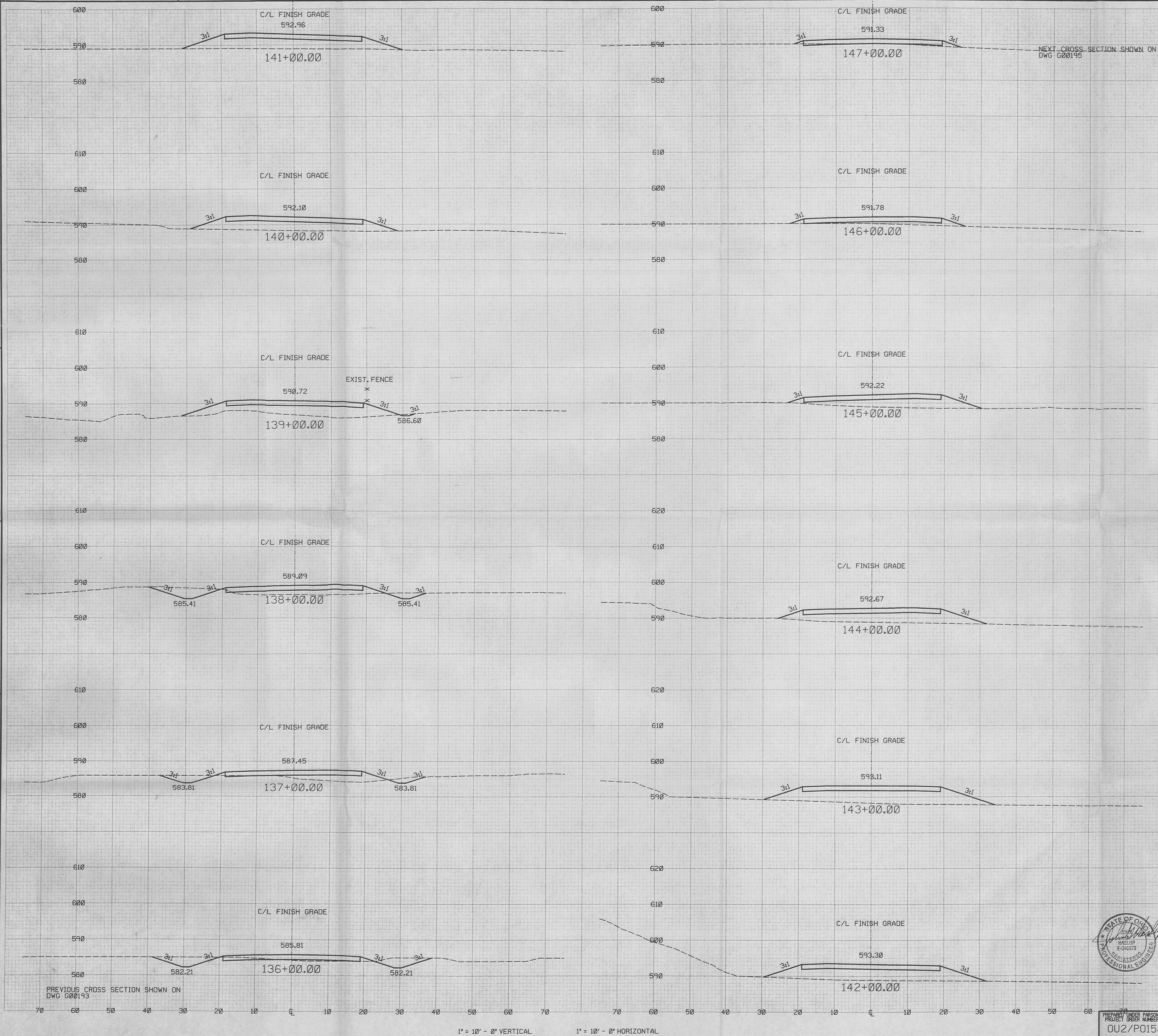
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00193	G0012	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER



NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00187 92X-5900-G-00188.
3. PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. DITCH BACK SLOPES IN CUTS GREATER THAN 5 FEET SHALL BE 2:1.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00188	PLAN AND PROFILE - SHEET 4 OF 5
92X-5900-G-00193	CROSS SECTIONS - SHEET 3 OF 6
92X-5900-G-00195	CROSS SECTIONS - SHEET 5 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION

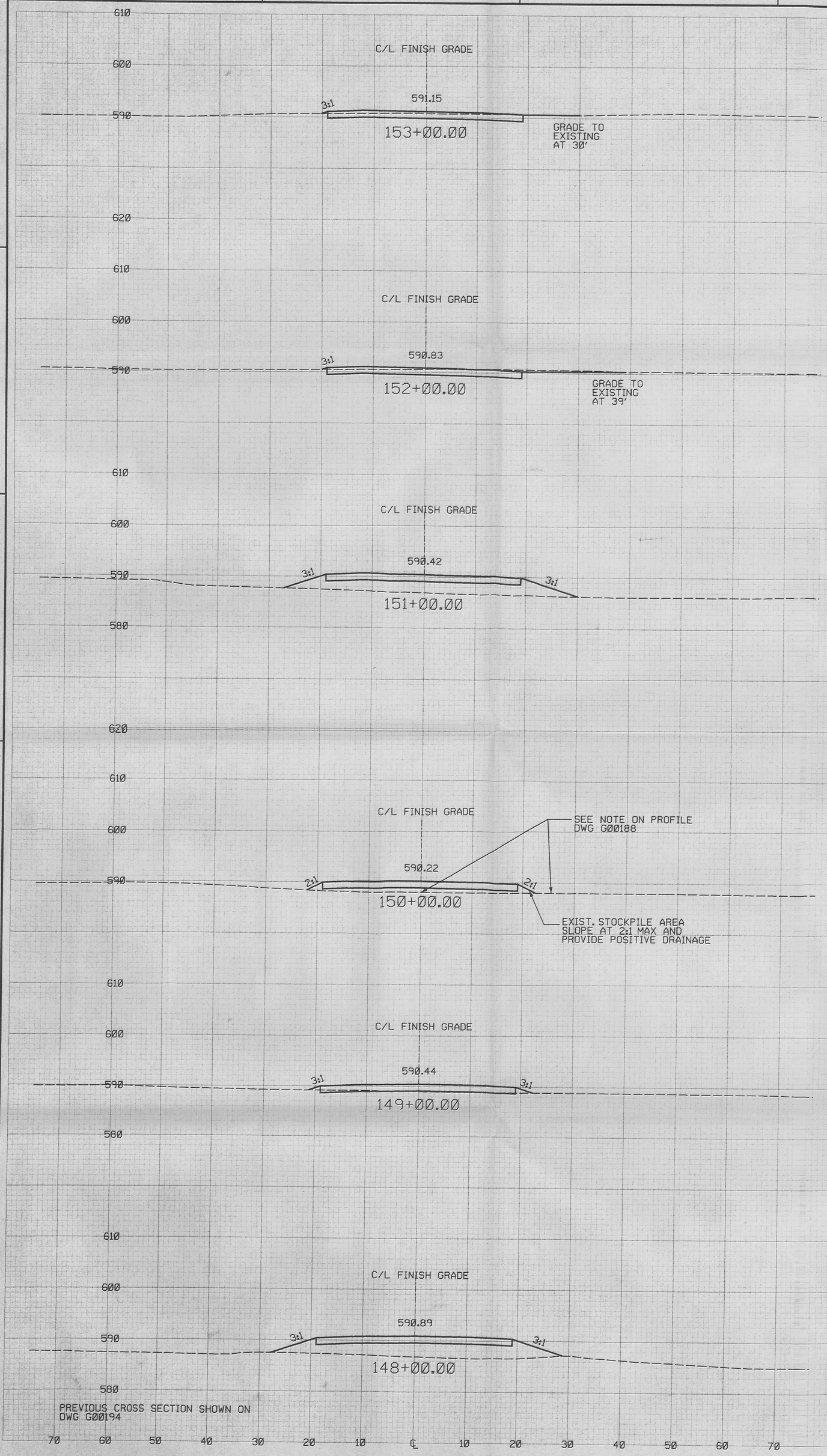
DRAWING TITLE: CIVIL CROSS SECTIONS SHEET 4 OF 6

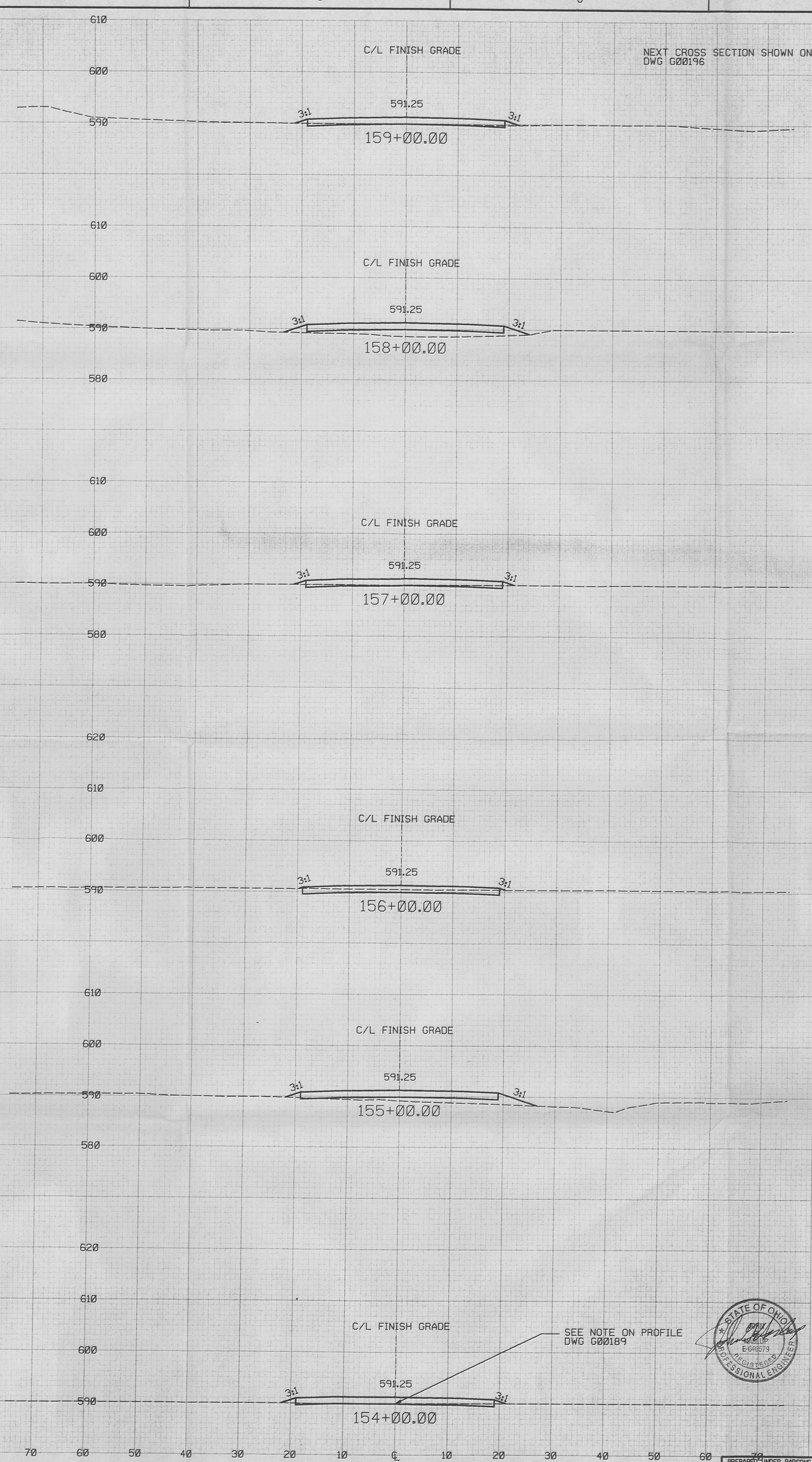
72

DRAWN BY: M. BESS | DATE: 12/18/95 | LEAD ENGINEER: [signature] | DATE: 7/23/96 | CHECKED BY: A. CHRISTO | DATE: 12/18/95
PLANT/BLDG. NO. | FLOOR | SCALE: 1" = 10' | CLASS
SUBMITTED FOR APPROVAL: [signature] 7/25/96 | FERMCO CRU APPROVAL: N/A | FERMCO PROJECT NUMBER: 20410
DOE PROJECT NO. | FEMP PROJECT NO.: WBS 1.1.1.1.2.3.6 00-90701 | DRAWING INDEX CODE NO.: 92X-5900-G-00194 | SHEET NO.: G0013 | REV. NO.: 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

STATE OF OHIO REGISTERED PROFESSIONAL ENGINEER





1" = 10' - 0" VERTICAL

1" = 10' - 0" HORIZONTAL

364

NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00188 AND 92X-5900-G-00189.
3. PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. DITCH BACK SLOPES IN CUTS GREATER THAN 5 FEET SHALL BE 2:1.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00188	PLAN AND PROFILE - SHEET 4 OF 5
92X-5900-G-00189	PLAN AND PROFILE - SHEET 5 OF 5
92X-5900-G-00194	CROSS SECTIONS - SHEET 4 OF 6
92X-5900-G-00196	CROSS SECTIONS - SHEET 6 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERNCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY

PARSONS

THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.

CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION

DRAWING TITLE: CIVIL CROSS SECTIONS SHEET 5 OF 6

73

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

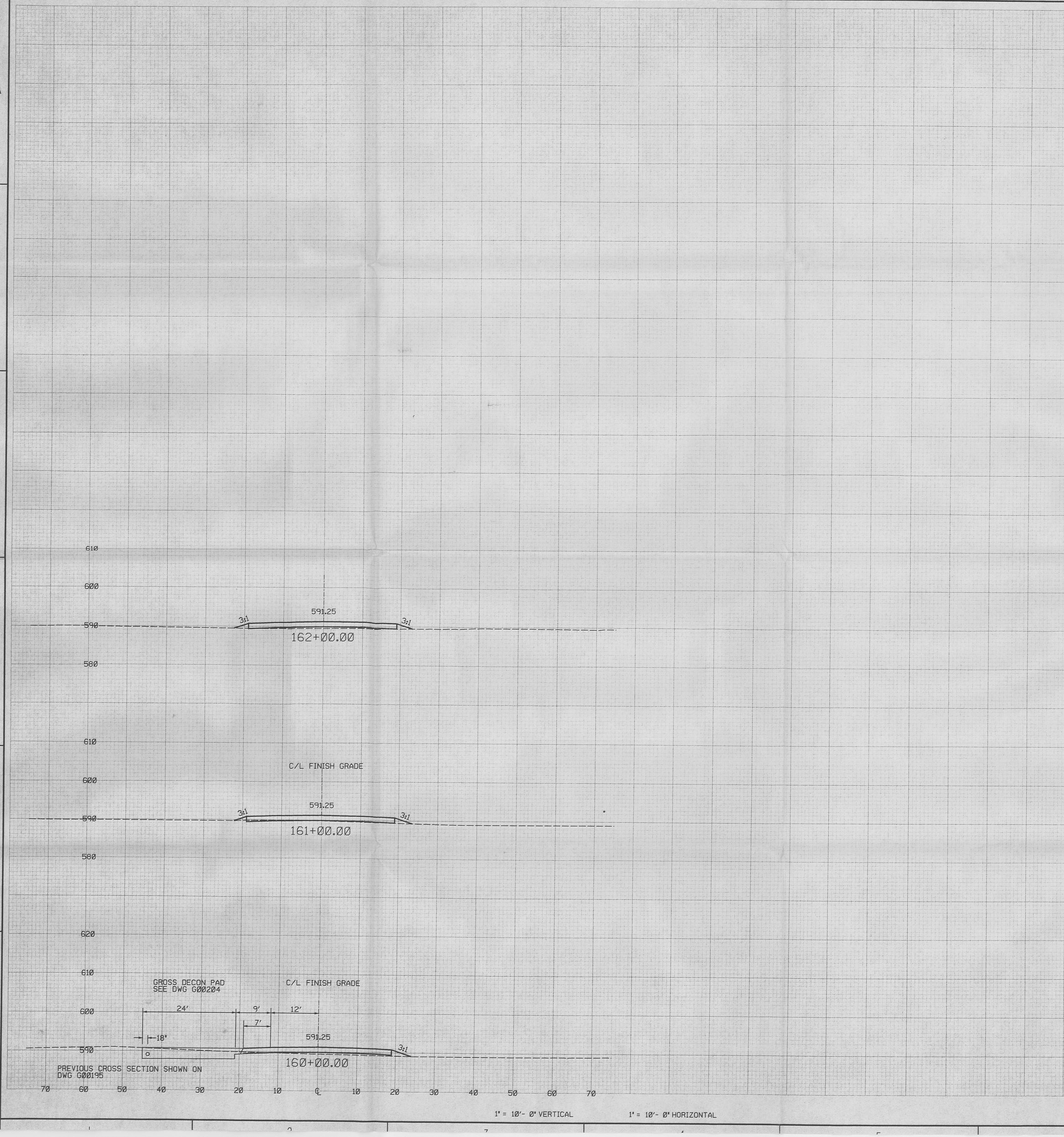
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" =10'	

SUBMITTED FOR APPROVAL	FERNCO CRU APPROVAL	FERNCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00195	G0014	0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

STATE OF OHIO — JOHN M. WESLEY — EXPIRES 12/31/97 — REGISTERED PROFESSIONAL ENGINEER



NOTES

1. FOR TYPICAL SECTIONS, SEE DRAWING 92X-5900-G-00184.
2. CROSS SECTIONS SHOWN ARE FOR STATIONS SHOWN ON DRAWINGS 92X-5900-G-00189 AND 92X-5900-G-00190.
3. PROPOSED DITCH SLOPES ARE 1 VERTICAL TO 3 HORIZONTAL.
4. FOR DETAILS OF TRUCK PULLOFF AREA AND AGGREGATE SECTIONS, SEE DRAWINGS 92X-5900-G-00204.
5. GRAVEL ROAD TO BE EXTENDED TO 2' WEST OF EXISTING PRODUCTION AREA FENCES. SEE DRAWING 92X-5900-G-00189.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00189	PLAN AND PROFILE - SHEET 5 OF 5
92X-5900-G-00195	CROSS SECTIONS - SHEET 5 OF 6
92X-5900-G-00204	GENERAL DETAILS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERNCO INITIALS AND DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A 7/25/96

STATE OF OHIO * JOHN M. WADLEY * E-40879 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER
OU2/P0158

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
CROSS SECTIONS
SHEET 6 OF 6

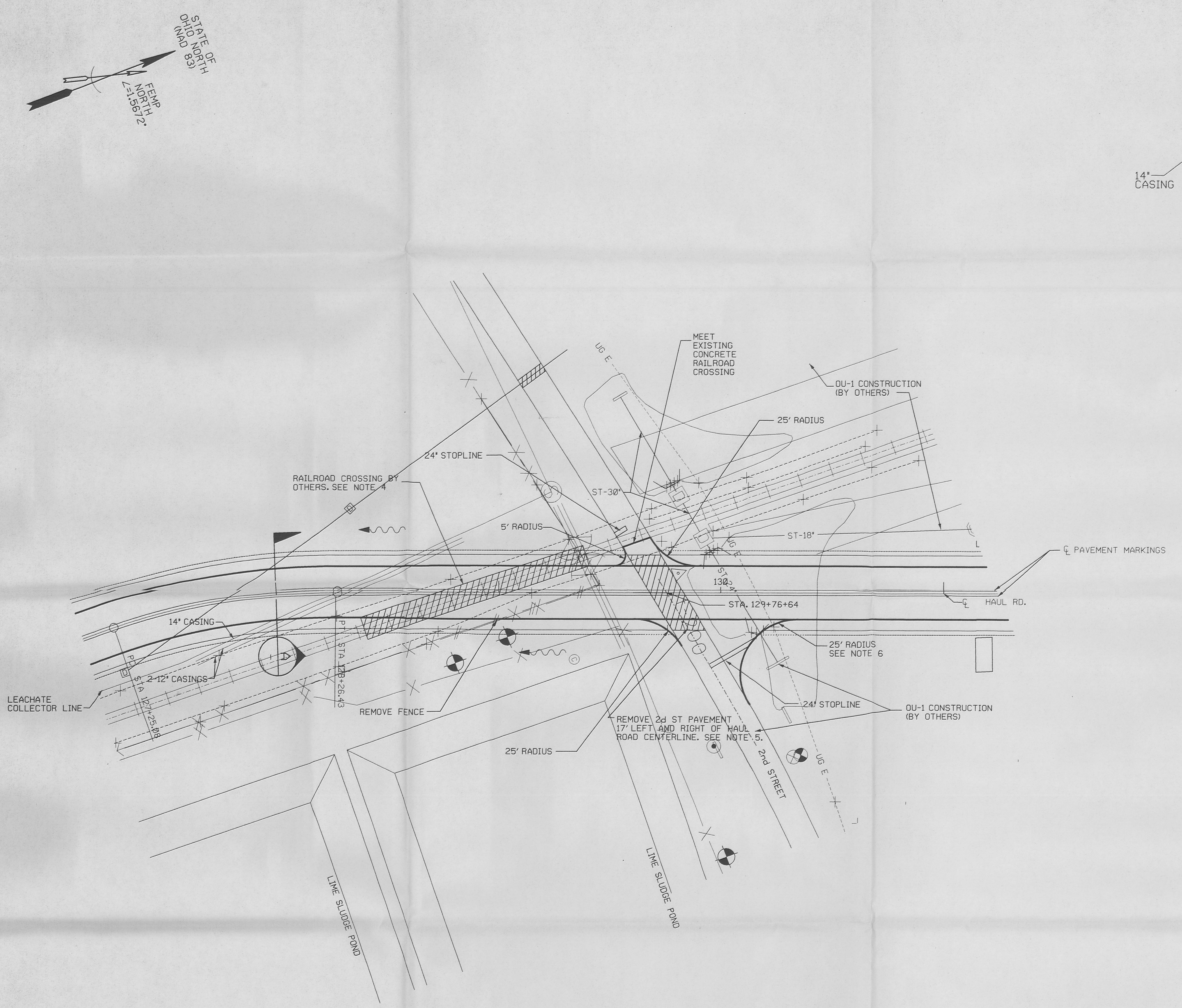
74

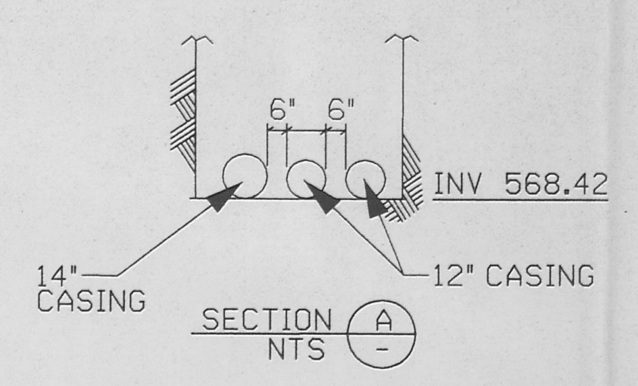
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95	John M. Wadley	7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 10'	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00196	G0015	Ø





NOTES

1. DETAILS SHOWN ARE FOR STATIONS SHOWN ON DRAWING 92X-5900-G-00187.
2. FOR CROSS SECTIONS, SEE DRAWING 92X-5900-G-00193.
3. FOR DETAILS OF THE RAILROAD CROSSING, SEE DRAWING 91X-5900-G-00230. WORK BY OTHERS. DRAWING FURNISHED BY FERMCO UPON REQUEST. ADJUST TYPICAL SECTION TO MATCH EDGE OF CROSSING.
4. ALL PAVEMENT REMOVAL IS INCIDENTAL TO EXCAVATION ITEM.
5. ALL INTERSECTION FILLET AREAS TO BE FULL PAVEMENT TYPICAL SECTION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5
92X-5900-G-00193	CROSS SECTIONS - SHEET 3 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION
DRAWING TITLE: CIVIL INTERSECTION DETAIL

75

DRAWN BY: M. BESS	DATE: 12/18/95	LEAD ENGINEER: [signature]	DATE: 7/23/96	CHECKED BY: A. CHRISTO	DATE: 12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: 1" = 20'	CLASS
SUBMITTED FOR APPROVAL: [signature] DATE 7/25/96		FERMCO CRU APPROVAL: N/A		FERMCO PROJECT NUMBER: 20410	
DOE PROJECT NO.	FEMP PROJECT NO.: 1.1.1.1.2.3.6 00-90701	DRAWING INDEX CODE NO.: 92X-5900-G-00199		SHEET NO.: G0016	REV. NO.: 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°

NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTER WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEE DRAWING 92X-5900-G-00205 FOR DETAILS OF SEDIMENT CONTROL MEASURES TO BE INSTALLED.

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- DITCH CHECKS

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00201	TEMPORARY EROSION CONTROL - SHEET 2 OF 2
92X-5900-G-00205	GENERAL DETAILS - SHEET 2 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMH	N/A 7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TEMPORARY EROSION CONTROL
SHEET 1 OF 2

76

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE/PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
DU2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00200	G0017	0

364

NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTER WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEDIMENT CONTROL MEASURES TO BE INSTALLED AS SHOWN ON DRAWING 92X-5900-G-00205.
5. HAY OR STRAW BALES WILL BE PLACED AROUND NEW AND EXISTING CATCH BASINS, WITHIN 50' OF ROAD CENTERLINE, AS SHOWN ON DRAWING 92X-5900-G-00205.

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- DITCH CHECKS

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00179	LEGEND AND SYMBOLS
92X-5900-G-00200	TEMPORARY EROSION CONTROL - SHEET 1 OF 2
92X-5900-G-00205	GENERAL DETAILS - SHEET 2 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

INITIALS AND DATE

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TEMPORARY EROSION CONTROL
SHEET 2 OF 2

77

DRAWN BY: M. BESS — DATE: 12/18/95 — LEAD ENGINEER: [signature] — DATE: 7/25/96 — CHECKED BY: A. CHRISTO — DATE: 12/18/95
PLANT/BLDG. NO. — FLOOR — SCALE: NONE — CLASS
SUBMITTED FOR APPROVAL: J. M. [signature] 7/25/96 — FERMCO CRU APPROVAL: N/A — FERMCO PROJECT NUMBER: 20410
DOE PROJECT NO. — FEMP PROJECT NO.: WBS 1.1.1.1.2.3.6 00-90701 — DRAWING INDEX CODE NO.: 92X-5900-G-00201 — SHEET NO.: G0018 — REV. NO.: 0

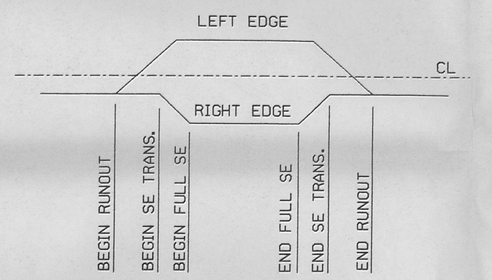
PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER — E-46579

SUPERELEVATION TABLES

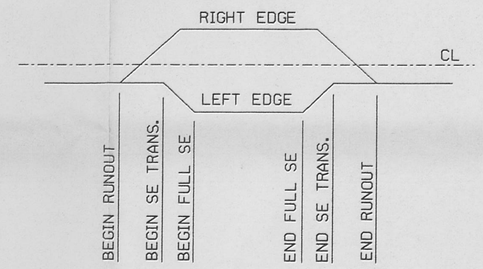
CURVES	STATIONS	CONTROLLING CONDITION	LEFT E.O.P ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
CURVE HLRD-1 RT							
	100+24.20	SLOPE TRANS.	568.03	0.10	568.13	567.83	-1.56
	100+50.00		568.30	1.57	568.10	567.81	-2.45
	100+89.04	BEGIN FULL SE	568.69	3.80	568.24	567.78	-3.80
	101+00.00		568.73	3.80	568.27	567.82	-3.80
	101+50.00		568.90	3.80	568.45	567.99	-3.80
	102+00.00		569.08	3.80	568.62	568.16	-3.80
	102+50.00		569.25	3.80	568.79	568.34	-3.80
	103+00.00		569.42	3.80	568.96	568.51	-3.80
	103+12.09	END FULL SE	569.46	3.80	569.01	568.55	-3.80
	103+50.00		569.44	2.49	569.14	568.84	-2.49
	103+76.93	END SE TRANS.	569.42	1.56	569.23	569.04	-1.56
	104+00.00		569.40	0.76	569.31	569.12	-1.56
	104+50.00		569.37	-0.96	569.48	569.30	-1.56
	104+67.25	END RUNOUT	569.35	-1.56	569.54	569.35	-1.56
CURVE HLRD-2 RT							
	109+20.51	BEGIN RUNOUT	571.00	-1.56	571.19	571.00	-1.56
	109+50.00		571.24	-0.49	571.30	571.11	-1.56
	110+00.00		571.65	1.33	571.49	571.30	-1.56
	110+06.30	BEGIN SE TRANS.	571.70	1.56	571.51	571.32	-1.56
	110+50.00		572.05	3.15	571.67	571.30	-3.15
	110+73.40	BEGIN FULL SE	572.24	4.00	571.76	571.28	-4.00
	111+00.00		572.34	4.00	571.86	571.38	-4.00
	111+50.00		572.52	4.00	572.04	571.56	-4.00
	112+00.00		572.71	4.00	572.23	571.75	-4.00
	112+50.00		572.89	4.00	572.41	571.93	-4.00
	113+00.00		573.08	4.00	572.60	572.12	-4.00
	113+04.98	END FULL SE	573.10	4.00	572.62	572.14	-4.00
	113+50.00		573.07	2.36	572.79	572.50	-2.36
	113+72.08	END SE TRANS.	573.05	1.56	572.87	572.68	-1.56
	114+00.00		573.04	0.54	572.97	572.80	-1.43
	114+50.00		573.00	-1.27	573.16	573.01	-1.20
	114+57.88	END RUNOUT	573.00	-1.56	573.19	573.05	-1.16
CURVE HLRD-3 LT							
	120+11.19	BEGIN RUNOUT	575.05	-1.56	575.24	575.05	-1.56
	120+50.00	(SEE NOTE 1)	NOTE 1	NOTE 1	575.38	NOTE 1	NOTE 1
	121+00.00		NOTE 1	NOTE 1	575.57	NOTE 1	NOTE 1
	121+43.18	BEGIN SE TRANS.	575.43	-1.56	575.62	575.80	1.56
	121+50.00		575.47	-2.38	575.76	575.96	1.72
	121+87.19	BEGIN FULL SE	575.58	-2.60	575.89	576.21	2.60
	122+00.00		575.63	-2.60	575.94	576.25	2.60
	122+50.00		575.82	-2.60	576.13	576.44	2.60
	122+65.85	END FULL SE	575.87	-2.60	576.19	576.50	2.60
	123+00.00		576.10	-1.79	576.31	576.53	1.79
	123+09.86	END SE TRANS.	576.16	-1.56	576.35	576.54	1.56
	123+50.00	(SEE NOTE 2)	576.31	-1.56	576.5	576.57	0.61
	124+00.00	(SEE NOTE 2)	576.50	-1.56	576.68	576.62	-0.57
	124+41.85	END RUNOUT	576.65	-1.56	576.84	576.65	-1.56
CURVE HLRD-4 RT							
	126+19.91	BEGIN RUNOUT	577.31	-1.56	577.50	577.31	-1.56
	126+50.00		577.54	-0.58	577.61	577.43	-1.56
	127+00.00		577.95	1.23	577.80	577.61	-1.56
	127+15.24	BEGIN SE TRANS.	578.04	1.56	577.86	577.67	-1.56
	127+50.00		578.35	3.05	577.98	577.62	-3.05
	127+77.57	FULL SE	578.52	3.60	578.09	577.65	-3.60
	128+00.00		578.53	3.13	578.16	577.78	-3.12
	128+36.26	END SE TRANS.	578.36	1.63	578.16	577.98	-1.56
	128+50.00		578.28	1.30	578.13	577.94	-1.56
	129+00.00		577.78	-0.53	577.85	577.66	-1.56
	129+31.58	END RUNOUT	577.44	-1.56	577.63	577.44	-1.56

CURVES	STATIONS	CONTROLLING CONDITION	LEFT E.O.P ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
CURVE HLRD-5 LT							
	136+07.83	BEGIN RUNOUT	585.75	-1.56	586.94	585.75	-1.56
	136+50.00		586.44	-1.56	586.63	586.54	-0.72
	137+00.00		587.26	-1.56	587.45	587.48	0.28
	137+50.00		588.08	-1.56	588.27	588.42	1.28
	137+63.83	BEGIN SE TRANS.	588.31	-1.56	588.49	588.68	1.28
	137+95.83	MAX SE	588.75	-2.20	589.02	589.28	2.20
	138+00.00		588.85	-1.97	589.09	589.32	1.97
	138+36.17	TRANS. POINT	589.68	0.00	589.68	589.68	0.00
	138+50.00		589.96	0.43	589.91	589.85	-0.43
	139+00.00		590.96	1.97	590.72	590.49	-1.96
CURVE HLRD-6 RT	139+53.00	BEGIN FULL SE	591.95	3.60	591.52	591.09	-3.60
	140+00.00		592.53	3.60	592.10	591.67	-3.60
	140+50.00		593.03	3.60	592.60	592.16	-3.60
	141+00.00		593.39	3.60	592.96	592.53	-3.60
	141+05.53	END FULL SE	593.42	3.60	592.99	592.56	-3.60
	141+50.00		593.53	2.81	593.19	592.86	-2.81
	142+00.00		593.53	1.92	593.30	593.06	-1.92
	142+50.00		593.39	1.03	593.27	593.14	-1.03
	143+00.00		593.13	0.14	593.11	593.09	-0.14
	143+07.61		593.08	0.00	593.08	593.08	0.00
	143+50.00	TRANS. POINT	592.80	-0.76	592.89	592.98	0.76
	144+00.00		592.47	-1.65	592.67	592.86	1.65
	144+50.00		592.14	-2.54	592.44	592.75	2.54
CURVE HLRD-7 LT	144+87.22	BEGIN FULL SE	591.90	-3.20	592.28	592.66	3.20
	144+98.43	END FULL SE	591.85	-3.20	592.23	592.61	3.20
	145+00.00		591.84	-3.15	592.22	592.60	3.15
	145+50.00		591.80	-1.70	592.00	592.20	1.70
	145+54.81		591.79	-1.56	591.98	592.17	1.56
	146+00.00	END SE TRANS.	591.59	-1.56	591.78	591.81	0.25
	146+50.00		591.37	-1.56	591.56	591.41	-1.21
	146+62.05	END RUNOUT	591.31	-1.56	591.50	591.31	-1.56
CURVE HLRD-8 RT							
	149+13.36	BEGIN RUNOUT	590.20	-1.56	590.39	590.20	-1.56
	149+50.00		590.17	-0.89	590.26	590.09	-1.56
	150+00.00		590.22	0.02	590.22	590.03	-1.56
	150+50.00		590.37	0.92	590.26	590.07	-1.56
	150+84.96	BEGIN SE TRANS.	590.55	1.56	590.36	590.17	-1.56
	151+00.00		590.64	1.83	590.42	590.20	-1.83
	151+09.15	BEGIN FULL SE	590.69	2.00	590.45	590.21	-2.00
	151+50.00		590.87	2.00	590.63	590.39	-2.00
	152+00.00		591.07	2.00	590.83	590.59	-2.00
	152+50.00		591.26	2.00	591.02	590.78	-2.00
	152+87.36	END FULL SE	591.36	2.00	591.12	590.88	-2.00
	153+00.00		591.36	1.77	591.15	590.93	-1.77
	153+11.56	END SE TRANS.	591.36	1.56	591.17	590.98	-1.56
	153+50.00		591.33	0.86	591.22	591.04	-1.56
	154+00.00		591.24	-0.05	591.25	591.06	-1.56
	154+50.00		591.14	-0.96	591.25	591.06	-1.56
	154+83.16	END RUNOUT	591.06	-1.56	591.25	591.06	-1.56
	162+28.36	HORIZONTAL POT	591.06	-1.56	591.25	591.06	-1.56



SE TRANSITION

CURVES: HLRD-1
HLRD-2
HLRD-4
HLRD-8



SE TRANSITION

CURVES: HLRD-3

NOTES 364

1. TRANSITION REQUIRED TO MATCH THE STEEL PLATE ON THE K-65 UTILITY TRENCH. SEE NOTE 10 ON DRAWING 92X-5900-G-00187.
2. TRANSITION REQUIRED TO MATCH THE RAIL ROAD CROSSING. SEE NOTE 6 ON DRAWING 92X-5900-G-00187.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMM	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL SUPERELEVATION TABLE 78

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

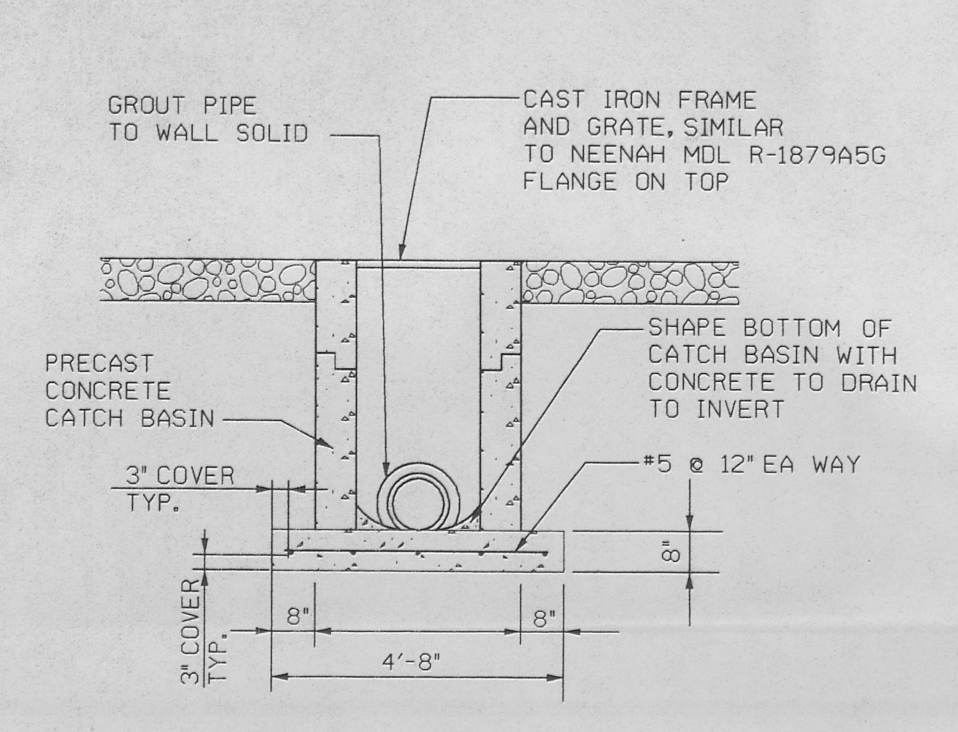
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER — E-016579

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
0U2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00203	G0019	0

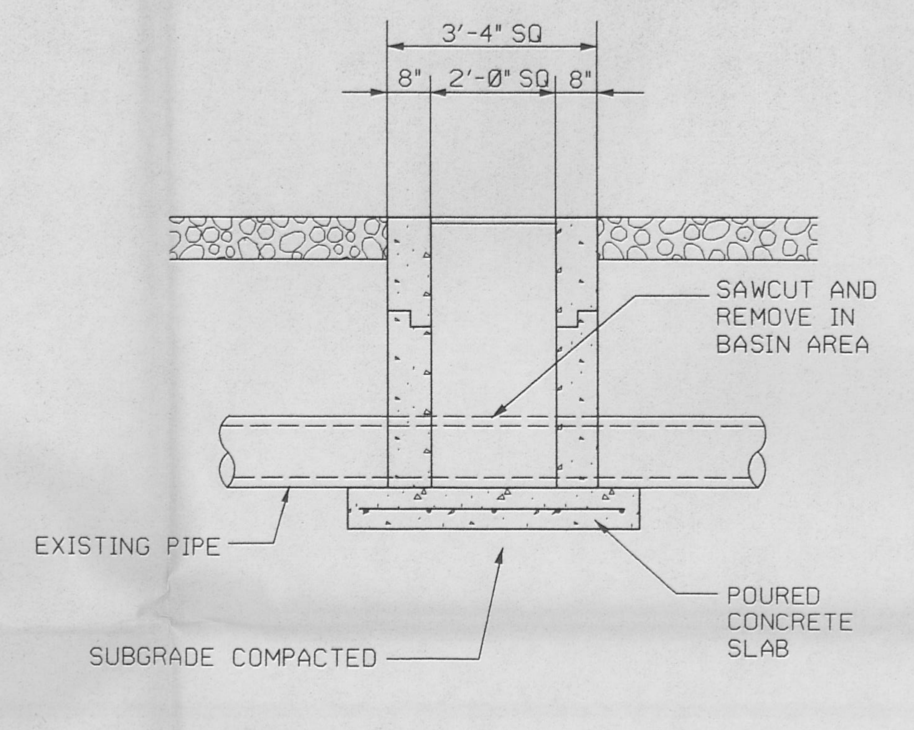
NOTES 364

1. FOR PAVEMENT SECTION DETAILS AT THE GROSS DECON PAD, SEE DRAWING 92X-5900-G-00196.



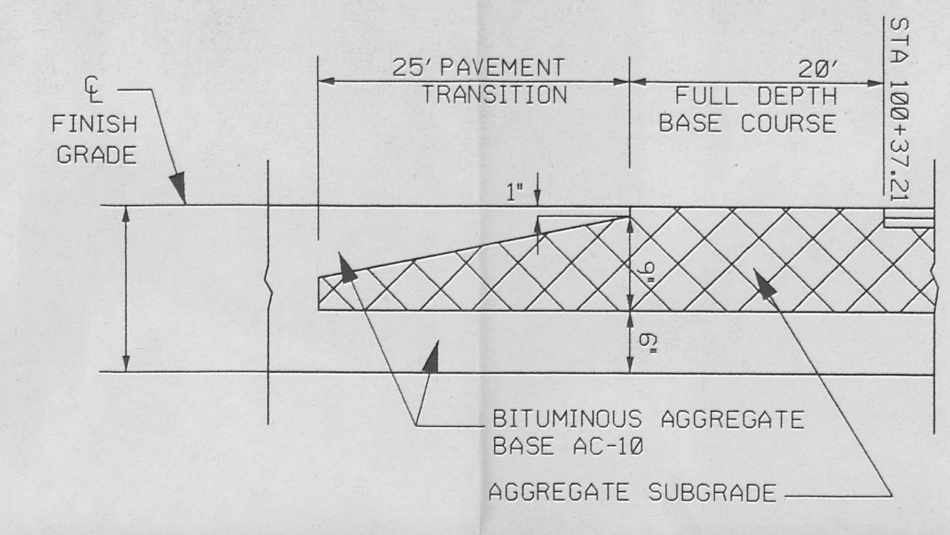
CATCH BASIN DETAIL

N.T.S.



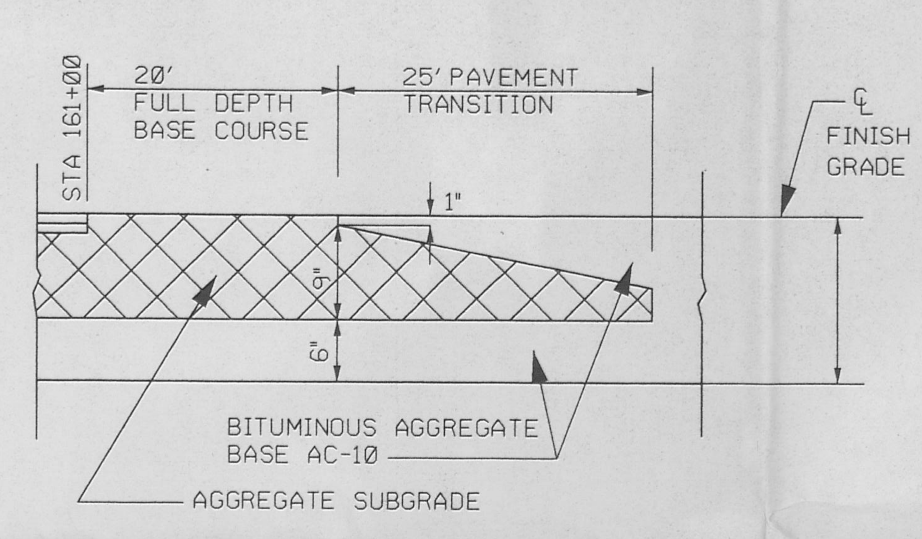
CATCH BASIN DETAIL

N.T.S.



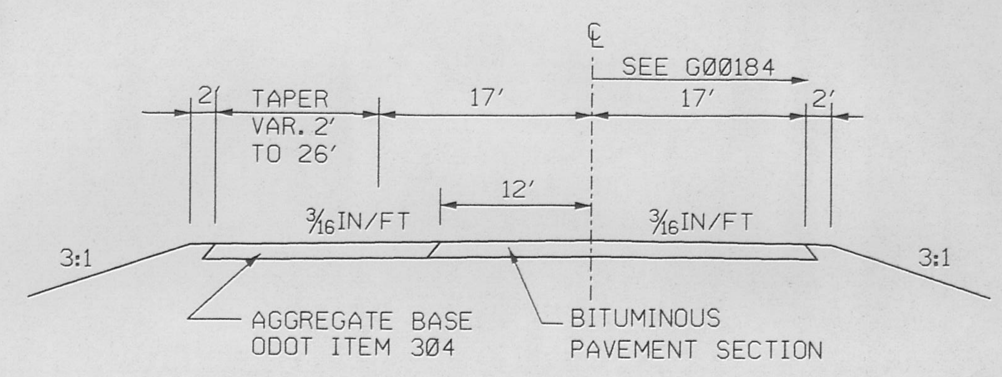
PAVEMENT TO AGGREGATE TRANSITION PROFILE

STA 100+37.21 N.T.S.



PAVEMENT TO AGGREGATE TRANSITION PROFILE

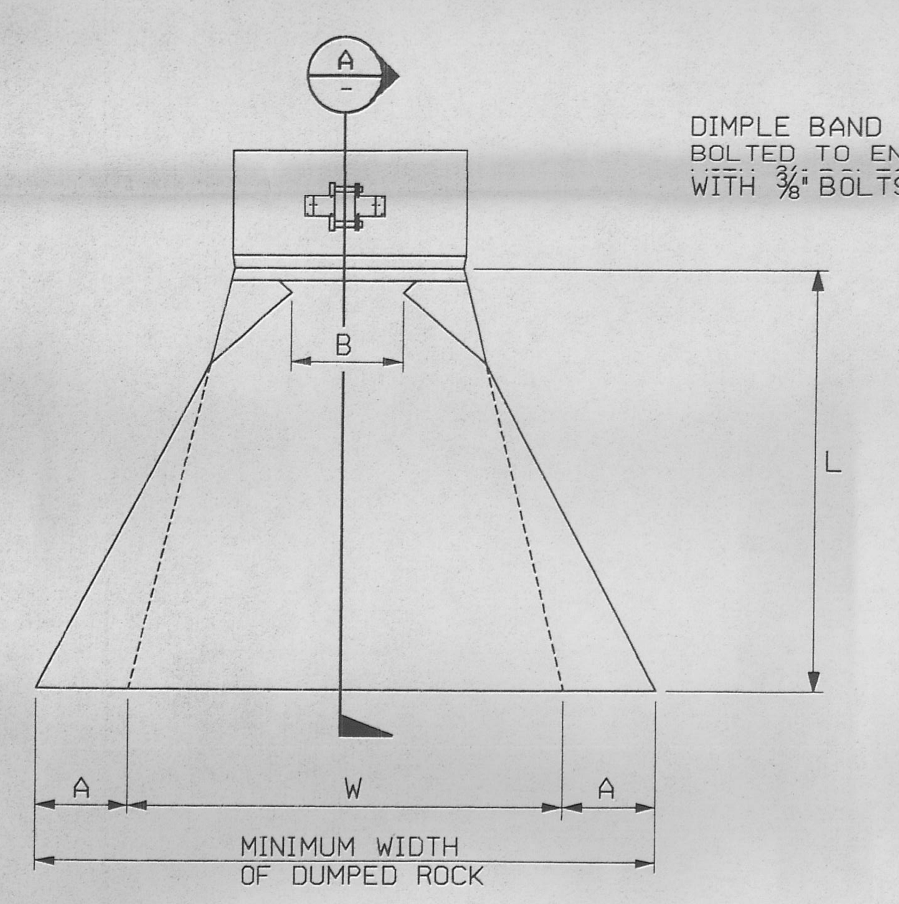
STA 161+00.00 N.T.S.



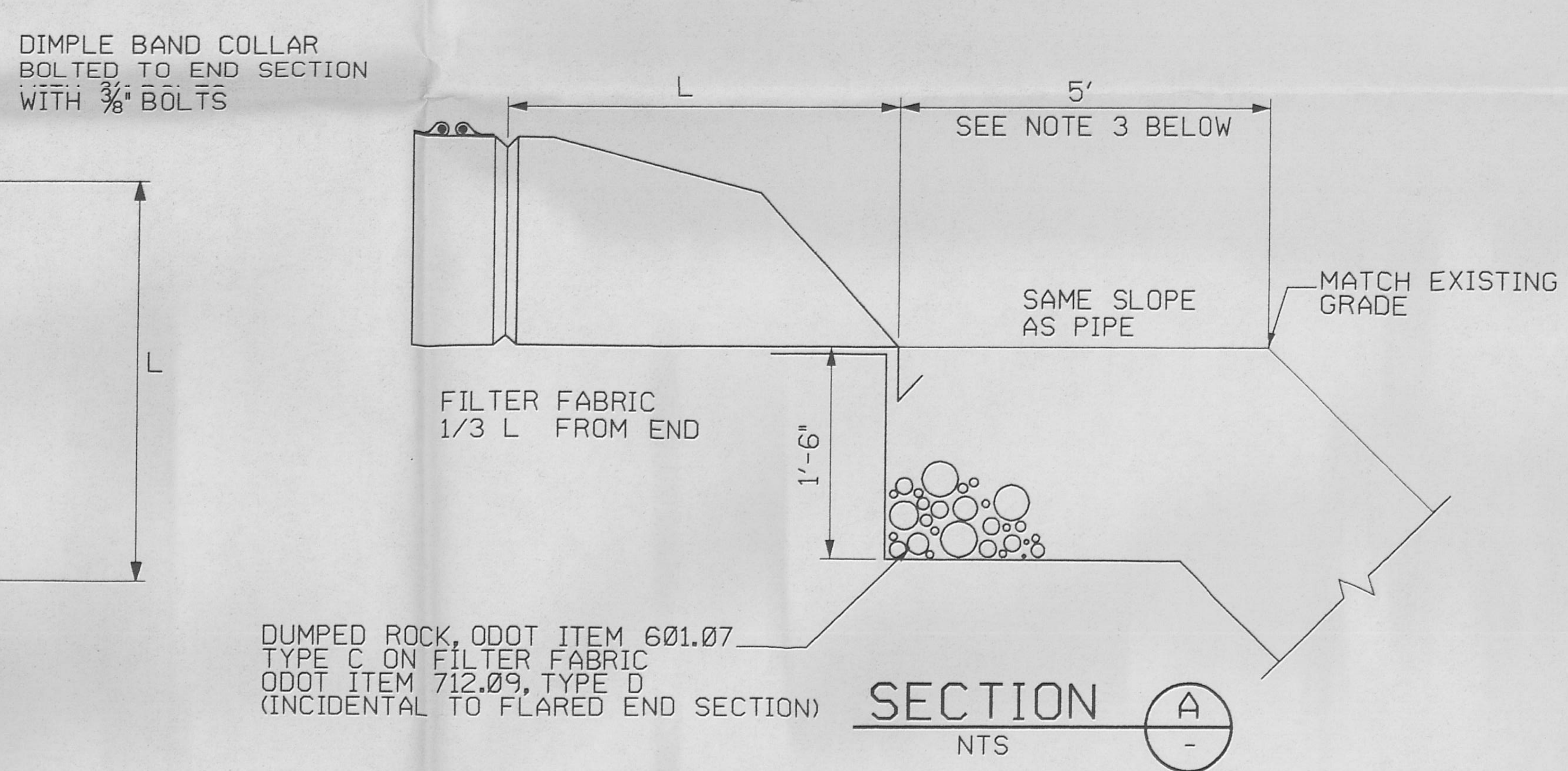
TYPICAL SECTIONS AT GROSS DECON PAD

STA. 158+75 TO 159+50
160+25 TO 161+00

N.T.S.



PLAN
NTS



SECTION (A)
NTS

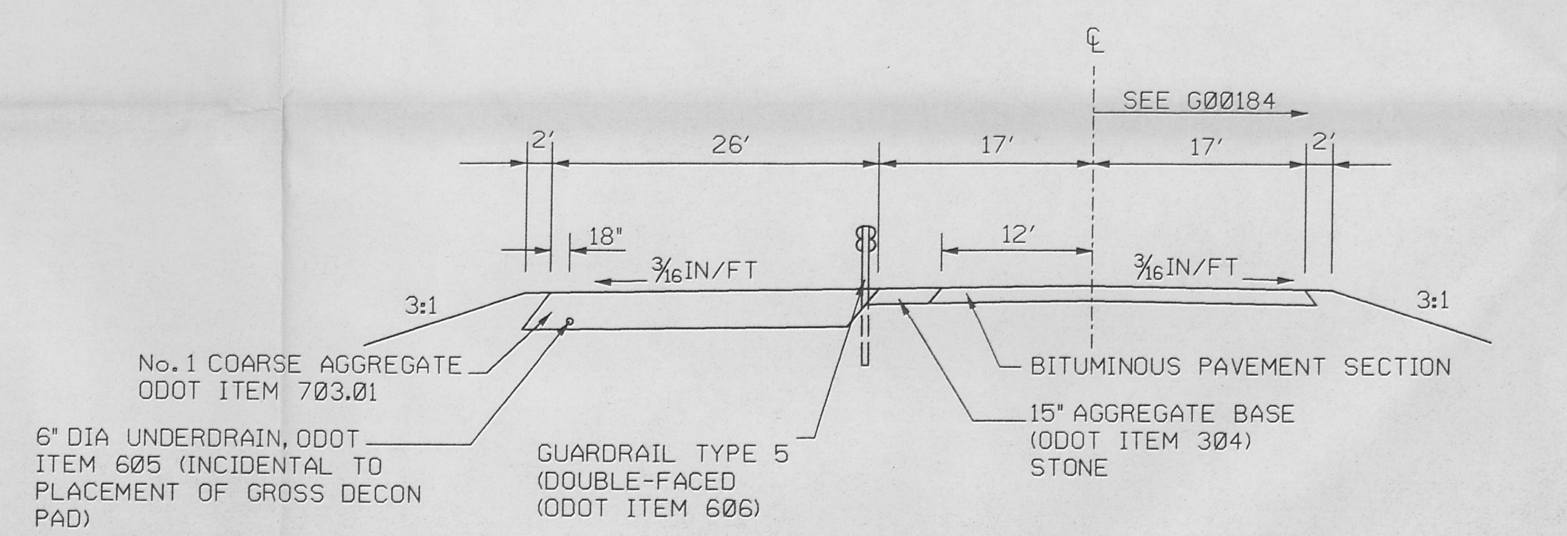
DETAIL (2 / G00204) REF G00185 G00186 G00188

STANDARD FLARED END SECTION

NTS

1. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. MATERIAL TO BE GALVANIZED STEEL.
3. LENGTH OF DUMPED ROCK IS 5' UNLESS NOTED OTHERWISE ON SITE/GRADING/UTILITY PLAN
4. DIMENSIONS, IN INCHES, ARE AS FOLLOWS:

12" DIA	24" DIA
A=6-1/2 (1"±)	A=10"
L=21"	L=41"
W=24"	W=48"
B=6-1/2"	B=13"



TYPICAL SECTION - STA. 159+50 TO 160+25

N.T.S.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00196	CROSS SECTIONS SHEET 6 OF 6

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/26/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION

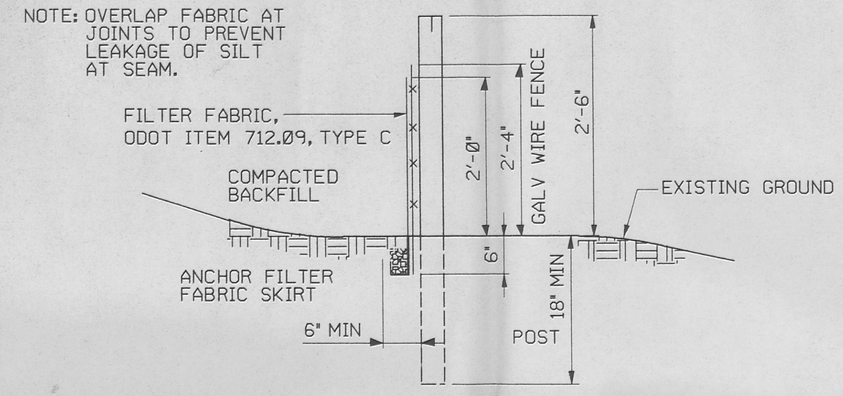
DRAWING TITLE: CIVIL GENERAL DETAILS SHEET 1 OF 2

79

DRAWN BY: M. BESS DATE: 12/18/95 | LEAD ENGINEER: [signature] DATE: 7/23/96 | CHECKED BY: A. CHRISTO DATE: 12/18/95
PLANT/BLDG. NO. | FLOOR | SCALE: NONE | CLASS
SUBMITTED FOR APPROVAL: [signature] DATE 7/26/96 | FERMCO CRU APPROVAL: N/A DATE | FERMCO PROJECT NUMBER: 20410
DOE PROJECT NO. | FEMP PROJECT NO.: WBS 1.1.1.1.2.3.6 00-90701 | DRAWING INDEX CODE NO.: 92X-5900-G-00204 | SHEET NO.: G0020 | REV. NO.: 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

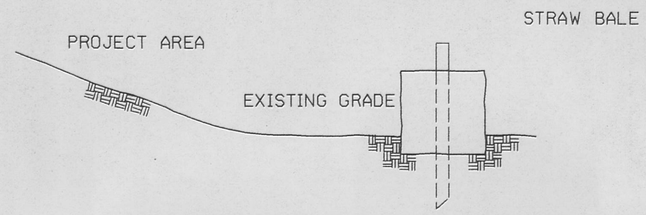
STATE OF OHIO REGISTERED PROFESSIONAL ENGINEER E-048079



SECTION

SILT FENCE DETAIL

NTS



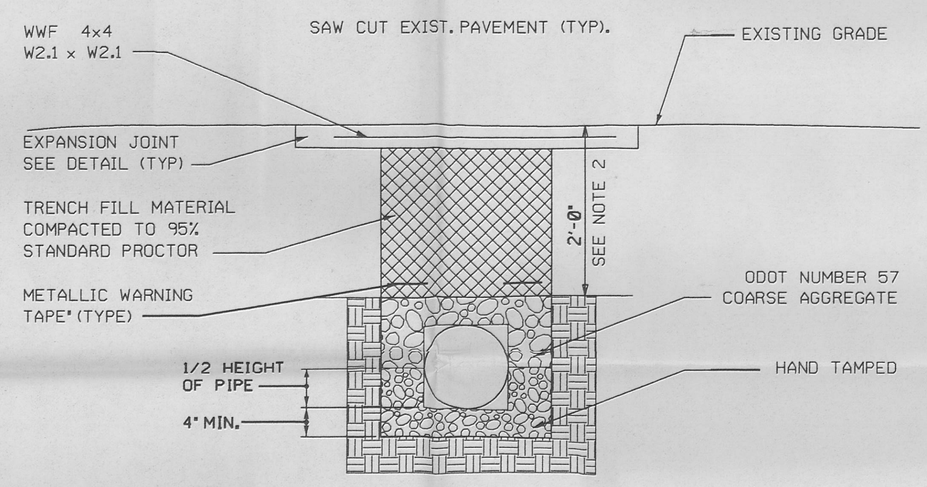
SECTION

NOTE:

1. STRAW BALES TO BE USED WHEN NATURAL GROUND IS LEVEL OR SLOPING AWAY FROM PROJECT.
2. PLACE STRAW BALES APPROXIMATELY PARALLEL TO BOTTOM OF FILL SLOPE.
3. STAKES SHALL BE 2" x 2" x 3'-0" LONG.
4. STRAW BALES SHALL BE STANDARD SIZE 18" x 18" x 48".
5. FOR EROSION CONTROL MAINTENANCE SEE SPECIFICATIONS.

STRAW BALE - SILT BARRIER DETAIL

NTS



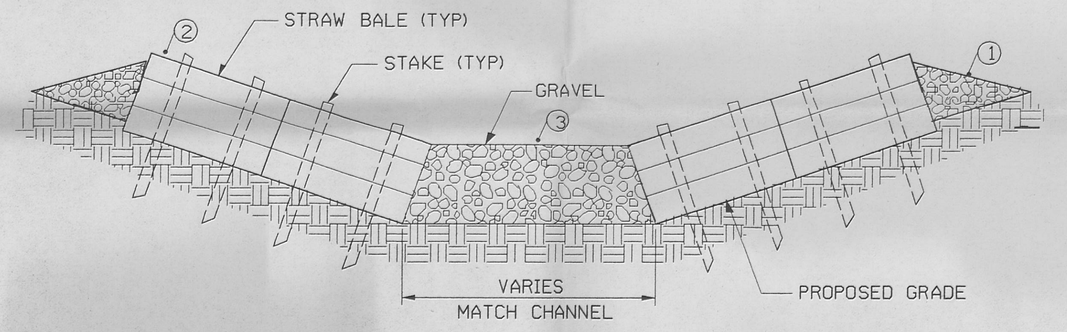
BEDDING UNDER PAVEMENT

NOTES:

1. USE ODOT ITEM 511 CLASS C CONCRETE.
2. MAY BE REDUCED TO 1'-6" IN ORDER TO PROVIDE CLEARENCE WIH EXISTING UTILITIES.

TYPICAL PAVEMENT REPAIR DETAIL

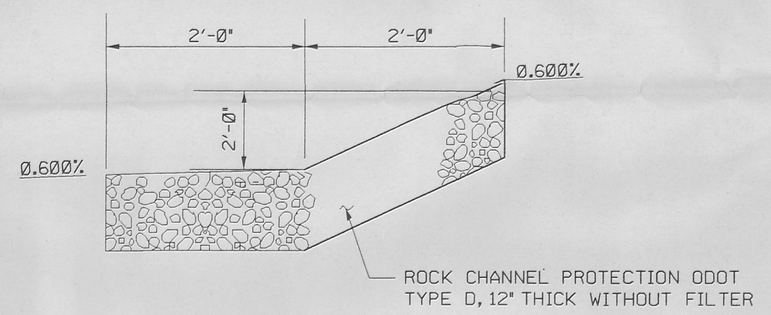
NTS



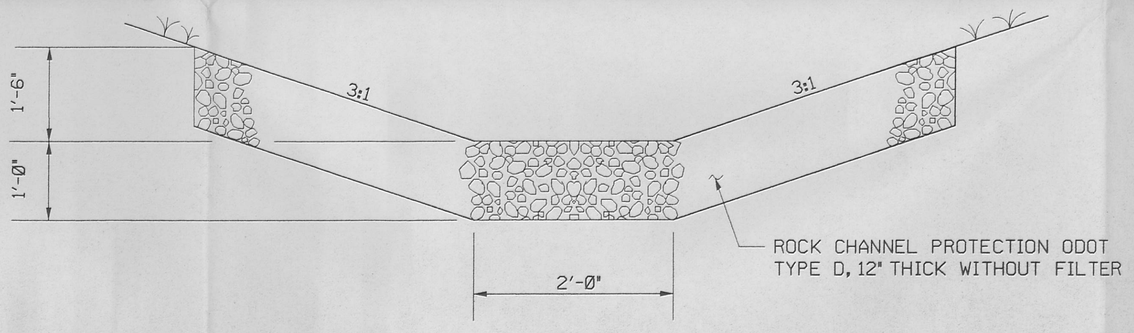
① ODOT ITEM 304 STABILIZED CRUSHED AGGREGATE (2-6" COURSES) ON FILTER FABRIC, ODOT ITEM 712.09, TYPE D.
② INSTALL STRAW BALE AS SHOWN ON DETAIL.
③ GRAVEL TO BE ODOT ITEM 601.07, TYPE D DUMPED ROCK. TOP WIDTH TO BE SAME AS STRAW BALES.

CHECK DAM DETAIL

NTS



PROFILE



CROSS SECTION

DITCH STEP TREATMENT DETAIL

NTS

NOTES

1. STRAW BALES ARE BEING USED TO MINIMIZE WASTE GENERATION ACCORDING TO FEMP WASTE MINIMIZATION PROGRAM.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00184	TYPICAL SECTIONS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
GENERAL DETAILS
SHEET 2 OF 2

80

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/12/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL: A-E DATE 7/25/96		FERMCO CRU APPROVAL: N/A DATE		FERMCO PROJECT NUMBER: 20410	

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.1.2.3.6 00-9070I	92X-5900-G-00205	G0021	0

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°

NOTES

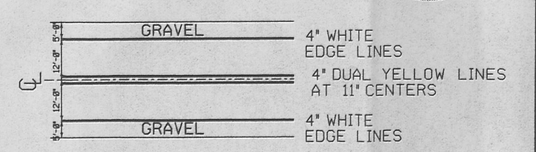
1. ALL SIGNS SHOWN ARE NUMBERED IN ACCORDANCE WITH THE STATE OF OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. THE LOCATION AND HEIGHT OF THE SIGNS SHALL BE IN ACCORDANCE WITH ODOT STANDARDS AND SPECIFICATIONS.
3. THE PAVEMENT WILL BE STRIPED WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH ODOT STANDARDS AND SPECIFICATIONS.
4. FERMCO IS RESPONSIBLE FOR PREVENTING TRAFFIC ON THE EXISTING GRAVEL ROAD FROM THE K-65 AREA.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

ALL PAVEMENT IS STRIPED AS SHOWN. WITH THERMOPLASTIC, ODOT ITEM 644



DETAIL 1 NTS

STATE OF OHIO — HASLUP E-046579 — REGISTERED PROFESSIONAL ENGINEER

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PAVEMENT MARKING AND SIGNING
SHEET 1 OF 2

81

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E 7/25/96 DATE	N/A DATE	20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00208	G0022	0

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°

NOTES

1. FOR DETAILS ON THE GROSS DECON PAD SEE DRAWING 92X-5900-G-00204.
2. THE LOCATION AND HEIGHT OF THE SIGNS SHALL BE IN ACCORDANCE WITH THE STATE OF OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. 24' STOP LINES WILL BE PLACED AT THE FOLLOWING CROSSINGS: B STREET AND 2ND STREET, 25' FROM HAUL ROAD CENTERLINE.
4. ALL SIGNS SHOWN ARE NUMBERED IN ACCORDANCE WITH THE STATE OF OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
5. FOR LOCATION OF PAVEMENT MARKINGS, SEE DRAWING 92X-5900-G-00208.
6. THE PAVEMENT WILL BE STRIPED WITH THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH ODOT STANDARDS AND SPECIFICATIONS.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00204	GENERAL DETAILS
92X-5900-G-00208	PAVEMENT AND SIGNING - SHEET 1 OF 2

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE	
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
PAVEMENT MARKING AND SIGNING
SHEET 2 OF 2

82

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95
PLANT/BLDG. NO.		FLOOR		SCALE	CLASS
				NONE	
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL		FERMCO PROJECT NUMBER	
A-E 7/25/96 DATE		N/A DATE		20410	

STATE OF OHIO JOHN M. WESLEY E-61079 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00209	G0023	Ø

PLAN AND PROFILE SHEET	CMP NO.	STA	NAD 83 N	NAD 83 E	SIZE AND TYPE	INVERT ELEVATION	ROCK CHANNEL PROTECTION
92X-5900-G-00185	1	101+16 L	478,302.46	1,347,466.52	100 LF - 24" CMP	563.72	
92X-5900-G-00185	2	101+16 R	478,380.56	1,347,528.99		563.85	
92X-5900-G-00185	3	109+19 L	479,064.73	1,347,194.05	70 LF - 24" CMP	563.76	
92X-5900-G-00185	4	109+42 R	479,101.52	1,347,253.60		565.55	
92X-5900-G-00186		118+50 L					120' x 11' x 1', TYPE D
92X-5900-G-00186		118+60 R					120' x 11' x 1', TYPE D
92X-5900-G-00186	5	118+97 L	479,854.87	1,347,690.94	100 LF - 24" CMP	563.50	
92X-5900-G-00186	6	119+26 R	479,799.56	1,347,774.25		563.60	
92X-5900-G-00187		134+97 L					4' x 11' x 1', TYPE D
92X-5900-G-00187		134+97 R					4' x 11' x 1', TYPE D
92X-5900-G-00187		136+97 L					4' x 11' x 1', TYPE D
92X-5900-G-00187		136+97 R					4' x 11' x 1', TYPE D
92X-5900-G-00187		138+97 L					4' x 11' x 1', TYPE D
92X-5900-G-00187		138+97 L					4' x 11' x 1', TYPE D
92X-5900-G-00188	7	150+84 L	481,937.21	1,349,439.76	55 LF - 12" CMP	587.70	
92X-5900-G-00188	8	150+97 R	481,886.62	1,349,461.34		586.20	

NOTES

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGENDS AND SYMBOLS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY

PARSONS

THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.

CINCINNATI, OHIO

PROJECT NAME

HAUL ROAD CONSTRUCTION

DRAWING TITLE

CIVIL DRAINAGE SUBSUMMARY

83

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

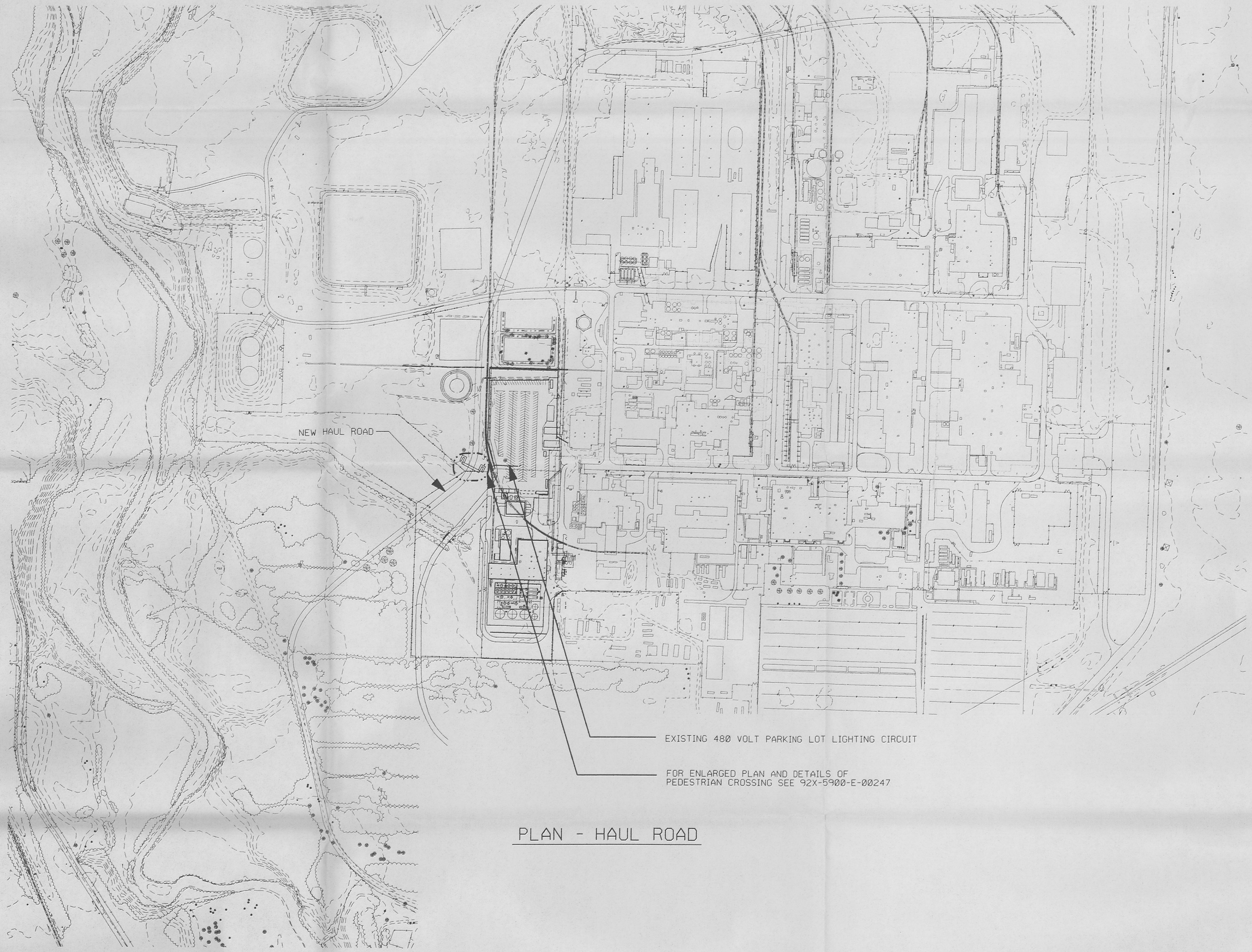
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

STATE OF OHIO JOHN M. WESLEY E-046379 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.2.3.6 00-90701	92X-5900-G-00210	G0024	0

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°



PLAN - HAUL ROAD

NOTES

1. SEE CIVIL PLAN AND PROFILE SHEETS FOR SPECIFIC HAUL ROAD ALIGNMENT INFORMATION.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-E-00247	PLAN AND DETAILS- PEDESTRIAN CROSSING

FOR NFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
ELECTRICAL SITE PLAN HAUL ROAD

84

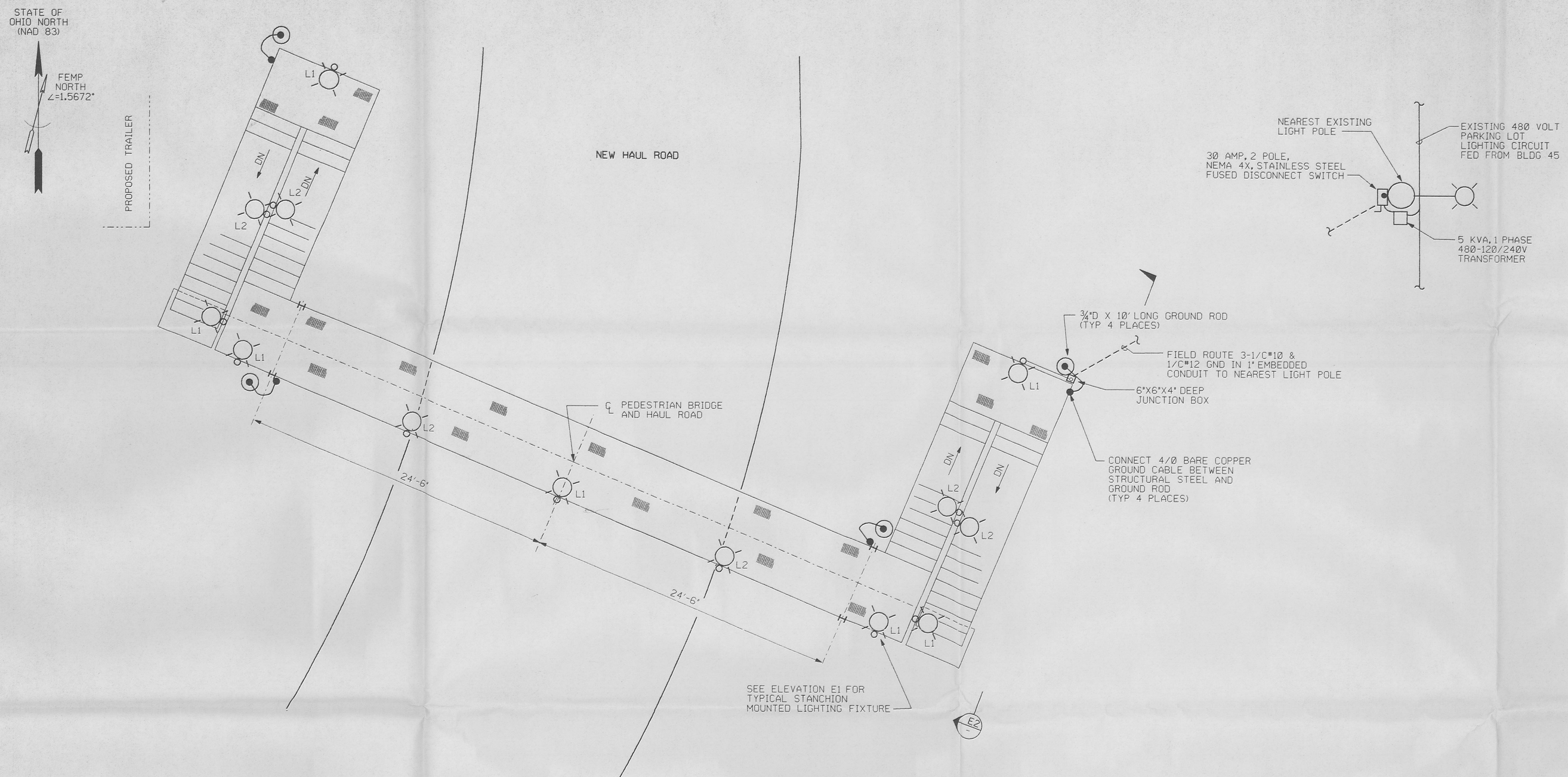
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
R. PROSKI	12/14/95	J. Fewell	7/22/96	J.L. COOPER	12/19/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		1" = 200'	

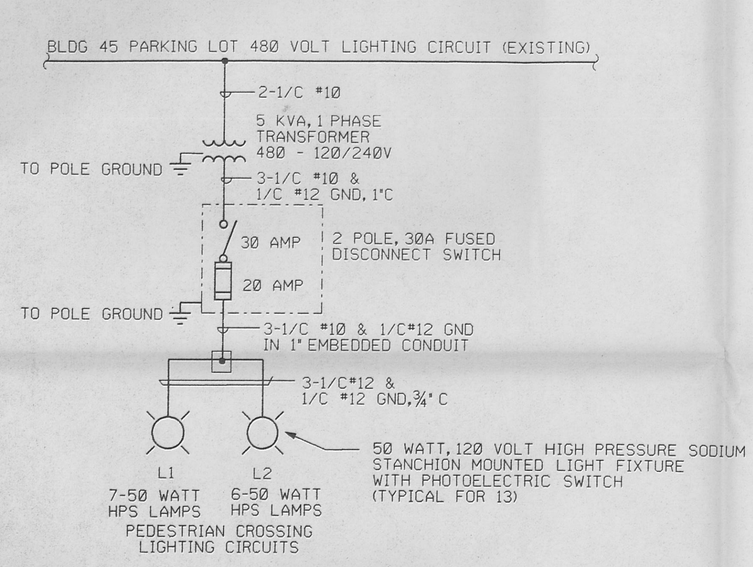
SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

STATE OF OHIO JAMES L. COOPER E-66804 REGISTERED PROFESSIONAL ENGINEER

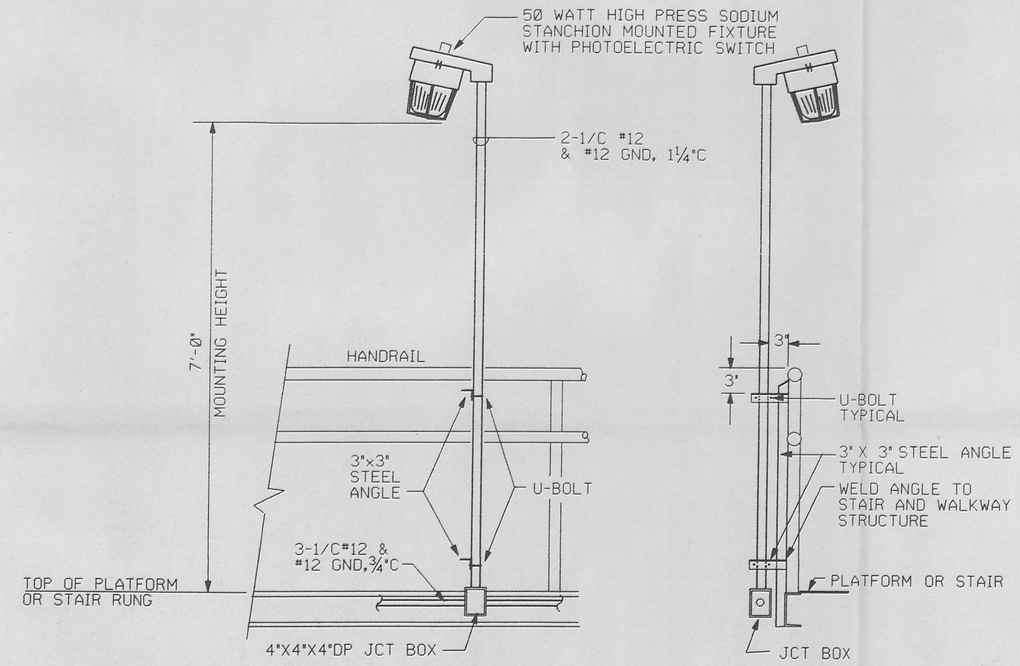
PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-E-00246	E0001	Ø



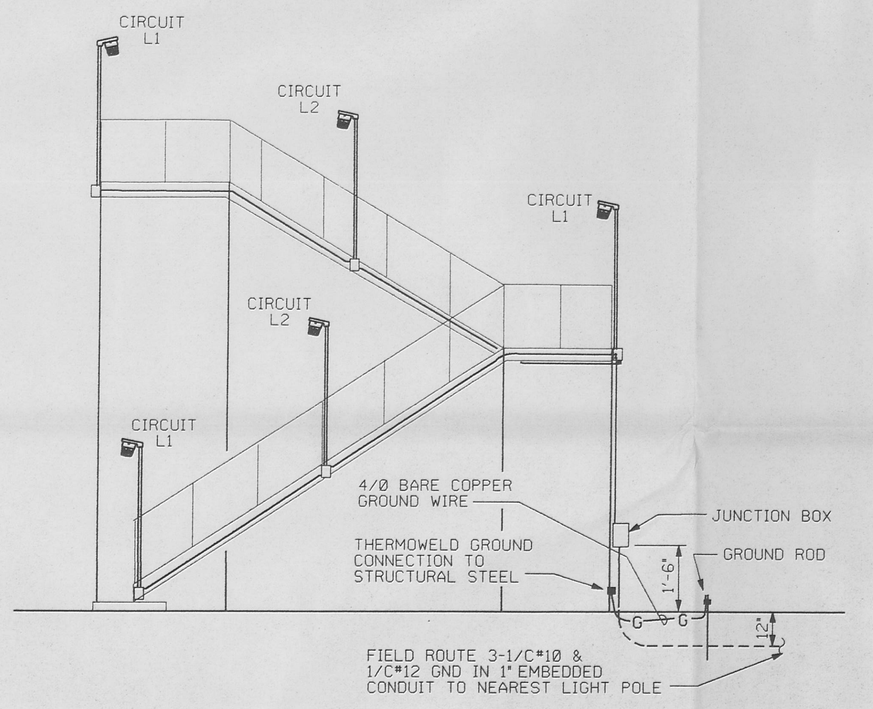
PLAN
HAUL ROAD PEDESTRIAN CROSSING



PEDESTRIAN CROSSING
LIGHTING DIAGRAM



TYPICAL STANCHION MOUNTED FIXTURE
ELEVATION E1
NTS



ELEVATION E2
NTS

NOTES

1. SEE DRAWING 92X-5900-E-00246 FOR SITE PLAN.
2. SEE DRAWING 92X-5900-S-00334 FOR STRUCTURAL DIMENSIONS AND DETAILS OF PEDESTRIAN CROSSING.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-E-00246	SITE PLAN - HAUL ROAD
92X-5900-S-00334	STRUCTURAL FRAMING PLAN AND ELEVATIONS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
				INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

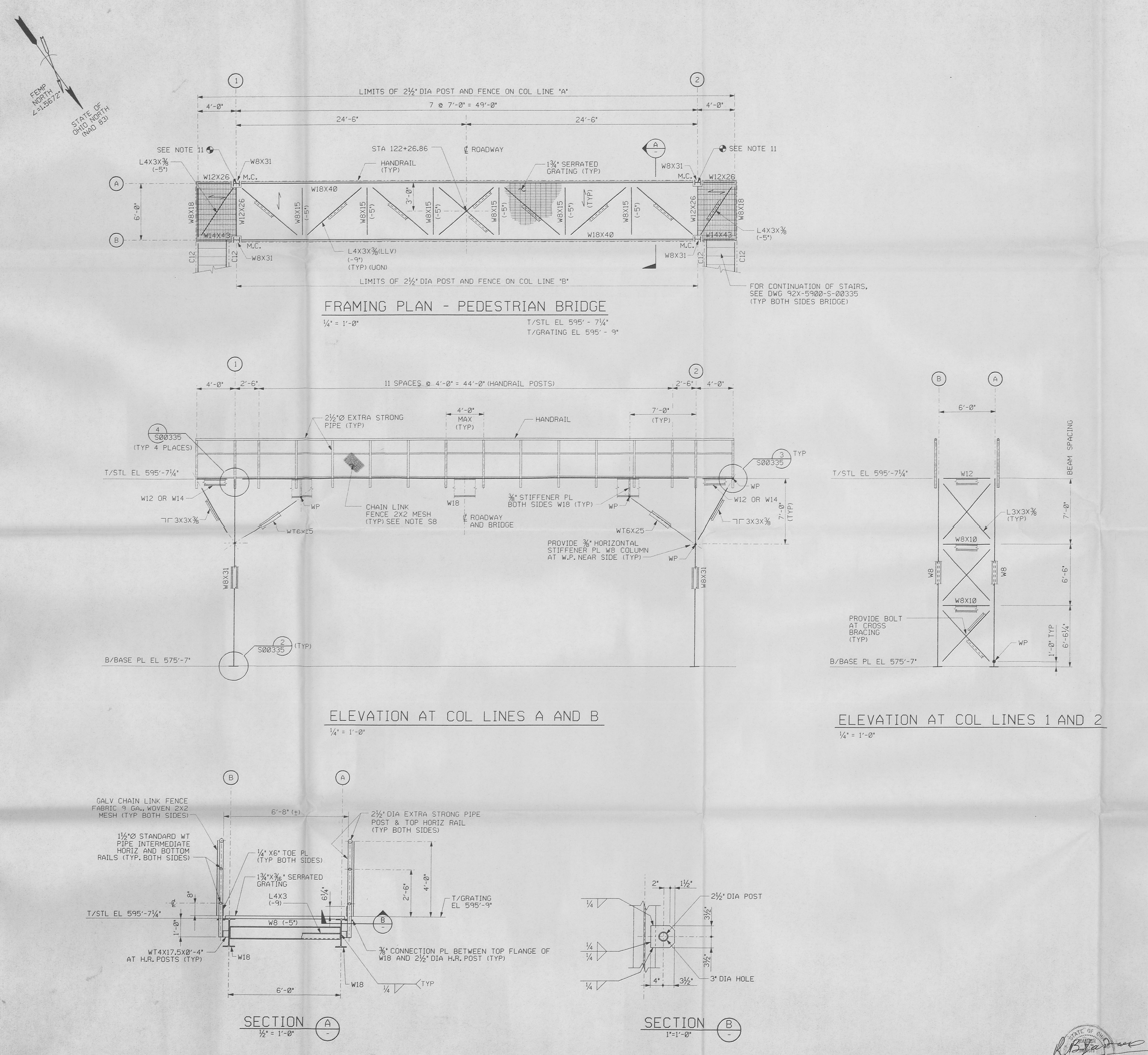
DRAWING TITLE
ELECTRICAL PLAN AND DETAILS PEDESTRIAN CROSSING

85

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
R. PROSKI	12/13/95	J Howell	7/25/96	J.L. COOPER	12/19/95
PLANT/BLDG. NO.		FLOOR		SCALE: NONE	CLASS
SUBMITTED FOR APPROVAL		FERMCO CRU APPROVAL: N/A		FERMCO PROJECT NUMBER: 20410	
A-E: JMW DATE 7/25/96		DATE			

STATE OF OHIO — JAMES L. COOPER E-56807 — PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
0U2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-E-00247	E0002	0



NOTES

364

GENERAL STEEL NOTES

S1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, AND STATE OF OHIO, DEPARTMENT OF TRANSPORATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS, SECTIONS 513 AND 711.

S2. MATERIAL SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS:
- STRUCTURAL STEEL - ASTM A36
- HIGH STRENGTH BOLTS - ASTM A325N
- ANCHOR BOLTS - ASTM A36 WITH HEAVY HEX NUTS AND WASHERS
- WELDING - AWS D1.1 CLASS E70XX (ELECTRODES)

S3. DESIGN LOADS ARE AS FOLLOWS:
- A) GOVERNING CODE: UNIFORM BUILDING CODE 1994 EDITION/OHIO BASIC BUILDING CODE, 1995 (0-BOCA) ASCE STANDARD, 7-93 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- B) BASIC WIND: 80 MPH ZONE, EXPOSURE C
- C) SEISMIC ZONE: 1
- D) LIVE LOAD: WALKWAYS AND PLATFORMS = 60 PSF; STAIRS = 100 PSF

S4. MINIMUM METAL THICKNESS FOR ALL CONNECTIONS, STIFFENER PLATES, ETC., IS 3/8".

S5. STANDARD FRAMED CONNECTIONS SHALL BE USED UNLESS INDICATED OTHERWISE. THESE CONNECTIONS SHALL HAVE THE MAXIMUM NUMBER OF BOLTS (OR EQUIVALENT WELDS) AS SHOWN IN APPROPRIATE TABLE PART 4 OF AISC MANUAL OF STEEL CONSTRUCTION.

S6. FOR STAIRS AND LANDINGS ALL HANDRAIL TO BE 1 1/2" (NOMINAL) DIAMETER CARBON STEEL. PROVIDE TWO RAILS WITH 1 1/2" DIAMETER POST AT 8'-0" OC (MAXIMUM).

S7. SERRATED GALVANIZED STEEL GRATING FOR BRIDGE, STAIRS AND PLATFORMS SHALL BE OF WELDED CONSTRUCTION WITH 1 1/4" X 3/16" OR 1 3/4" X 3/16" BEARING BARS SPACED AT 1 3/16" CENTERS AND CROSS BARS AT 4" CENTERS WHERE NOTED. FIELD WELD THE BEARING BARS TO THE SUPPORT STEEL WITH 3/16" FILLET WELD, 3/4" LONG. WELD THIRD BEARING BAR FROM END OF PANEL EACH SIDE. PROVIDE ONE WELD IN THE MIDDLE OF PANEL AT INTERMEDIATE SUPPORT. AS AN ALTERNATE, F-9 FASTENERS AS MANUFACTURED BY IKG BORDEN OR EQUAL COULD BE USED TO FASTEN THE GRATING. TREADS FOR STAIR SHALL BE WITH CHECKERED PLATE NOSING.

S8. BRIDGE GALVANIZED FENCE AND SUPPORTS: CHAIN LINK FENCE FABRIC CONFORMING TO ASTM-A-392 SHALL BE NO.9 GAUGE WIRE WOVEN IN A 2 INCH MESH AND GALVANIZED AFTER WEAVING WITH A CLASS II ZINC COATING. GALVANIZED PIPE RAIL AND FENCE SUPPORTS SHALL CONFORM TO ASTM A-53 GRADE B, TYPE S OR E. ASTM A-36 STEEL SHALL BE USED FOR ALL HARDWARE WITH ASTM A-123 AND A-153. ALL WELDING AND ERECTION DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH MATERIAL CONFORMING TO MILITARY SPECIFICATION MIL-P-21035. 1 1/2" DIAMETER PIPES SHALL BE USED FOR HORIZONTAL HAND RAIL AND 2 1/2" DIA PIPES AT 4'-0" CENTERS FOR SUPPORT POSTS AND TOP HORIZONTAL RAIL.

S9. SHOP AND FIELD PAINTING AS PER OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTIONS 514.04 AND 515.05.

S10. ⟵ INDICATES GRATING BEARING BARS SPAN DIRECTION.

S11. FOR HAUL ROAD AND PEDESTRIAN BRIDGE LOCATION, SEE DRAWING 92X-5900-G-00186.

S12. M.C. INDICATES MOMENT CONNECTIONS, SEE DRAWING 92X-5900-S-00335.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	INDEX DRAWING
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-S-00335	FRAMING SECTIONS AND DETAILS
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMU	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION

DRAWING TITLE: STRUCTURAL FRAMING PLAN AND ELEVATIONS PEDESTRIAN BRIDGE

86

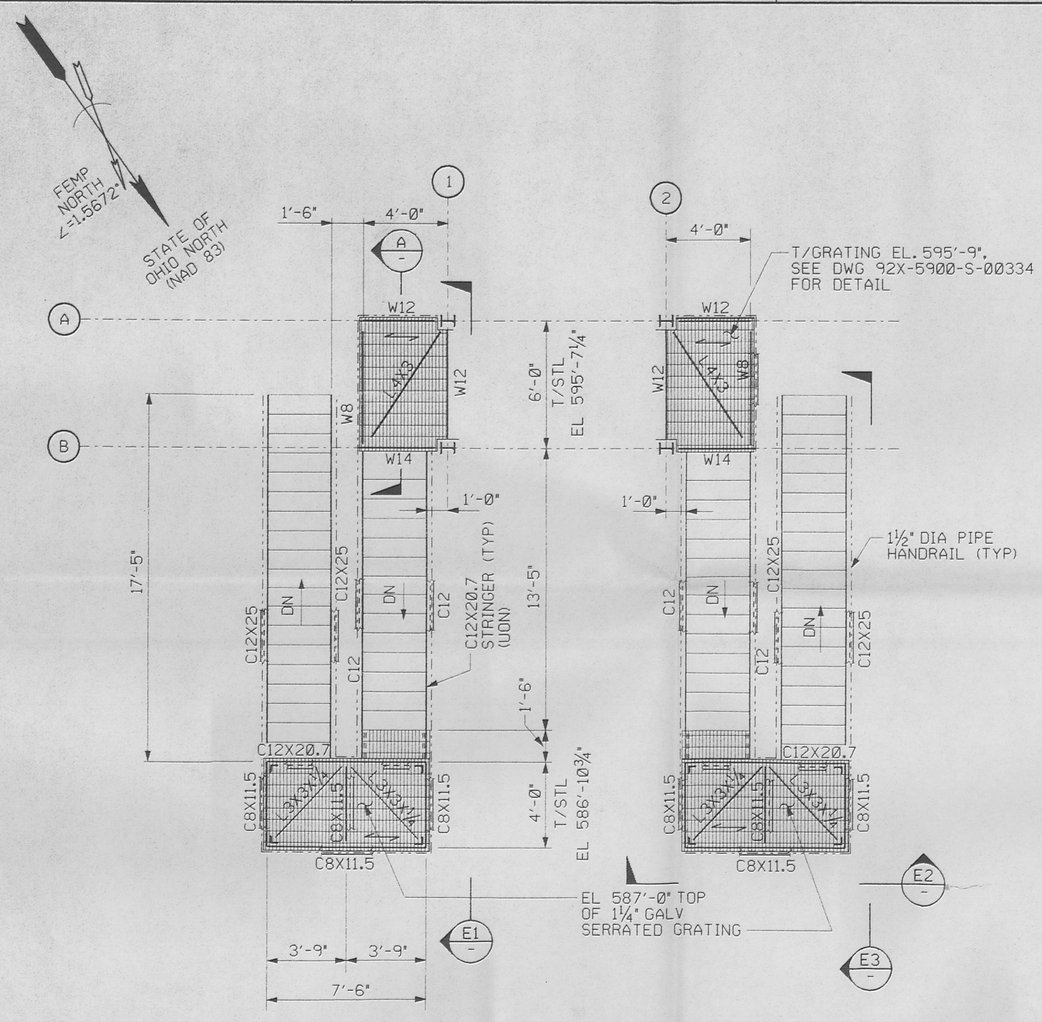
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
E LESTER	4/04/96	[signature]	7/20/96	G.R. HACKER/R.B.J.	4/26/96

PLANT/BLDG. NO. | FLOOR | SCALE: 1/4" = 1'-0" | CLASS

SUBMITTED FOR APPROVAL: [signature] DATE 7/25/96 | FERMCO CRU APPROVAL: N/A | FERMCO PROJECT NO.: 20410

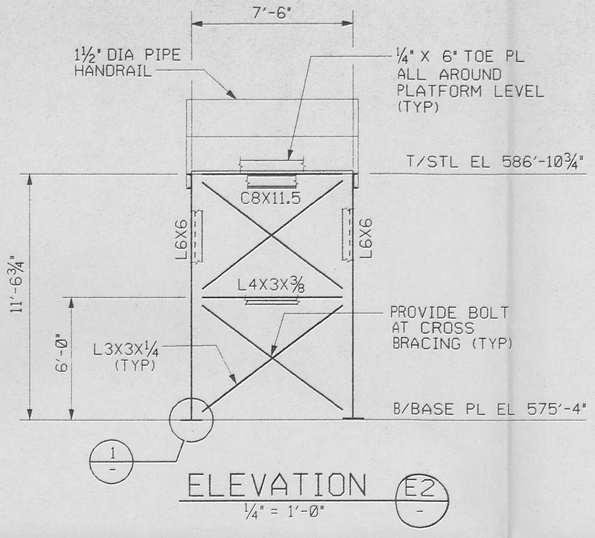
PREPARED UNDER PARSONS PROJECT ORDER NUMBER: OU2/P0158

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-S-00334	S0001	0



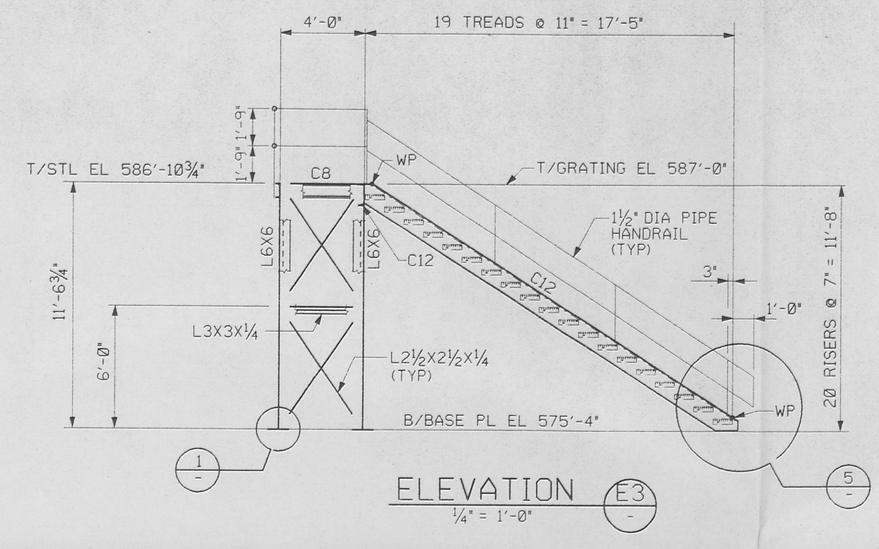
PLAN - STAIR TOWERS

¼" = 1'-0"



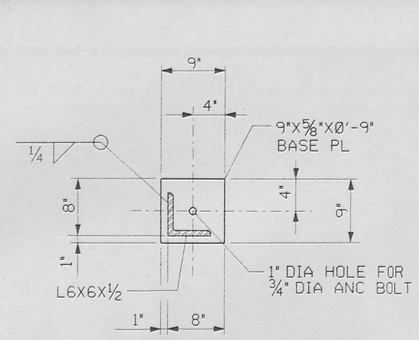
ELEVATION E2

¼" = 1'-0"



ELEVATION E3

¼" = 1'-0"

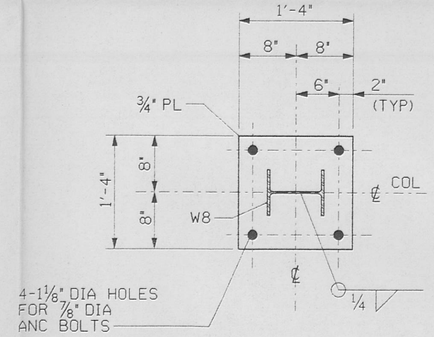


BASE PLATE

(TYP 4 PLCS PER FDN)

DETAIL 1

1" = 1'-0"

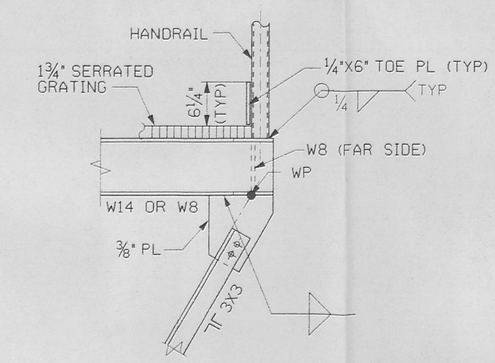


BASE PLATE

(TYP 2 PLCS PER FDN)

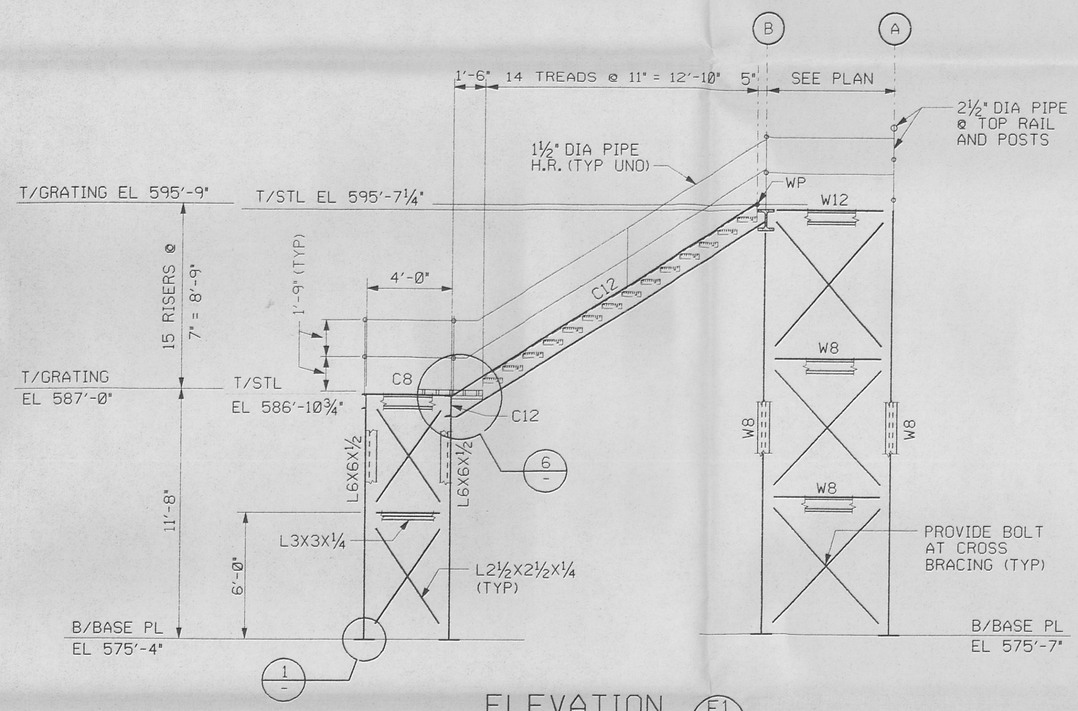
DETAIL 2

1'-1'-0" — REF G00335 G00336



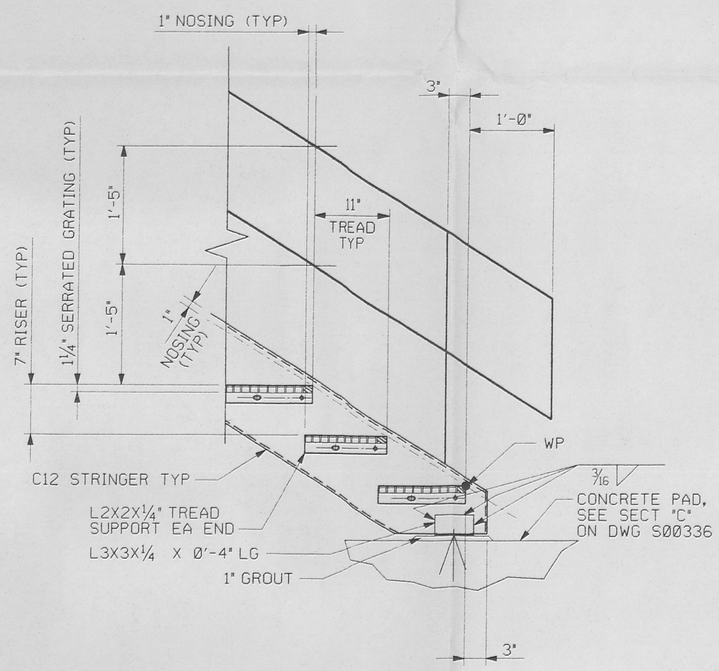
DETAIL 3

1" = 1'-0" — REF G00335 G00334



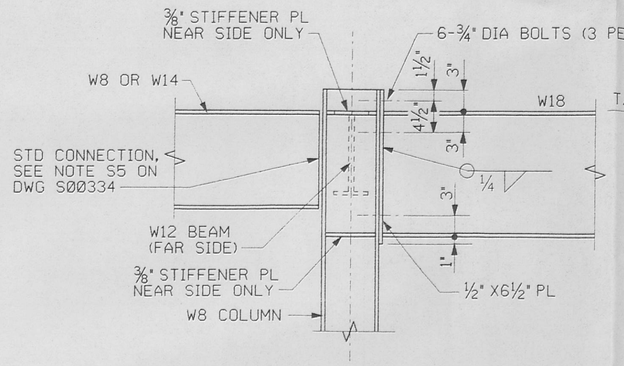
ELEVATION E1

¼" = 1'-0"



DETAIL 5

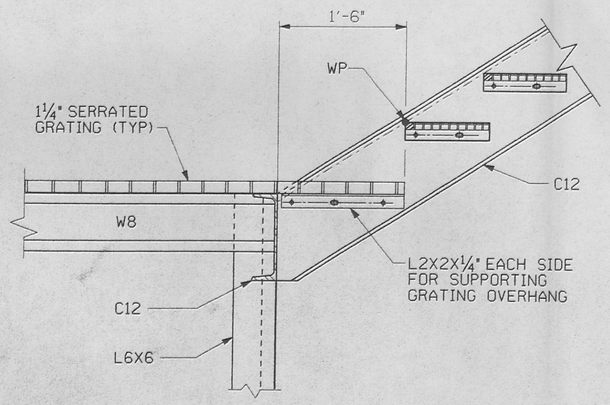
1" = 1'-0"



DETAIL 4

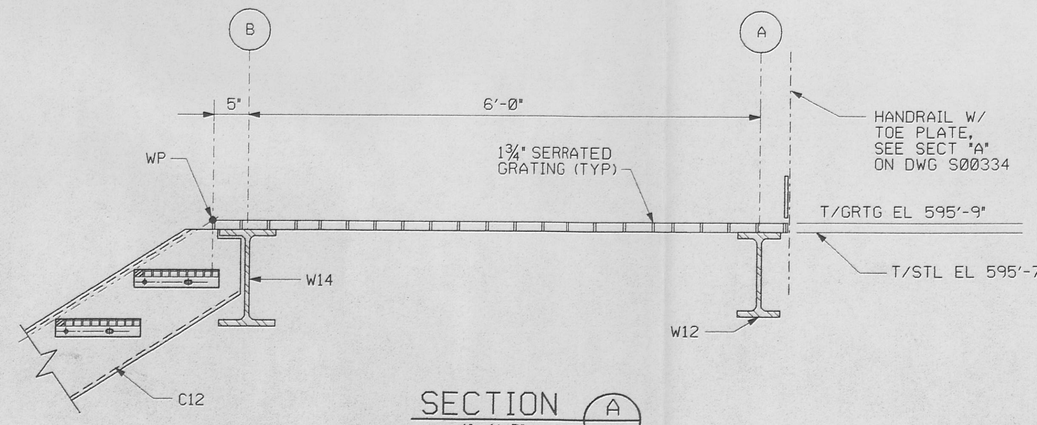
1" = 1'-0" — REF S00335 S00334

(M.C.=MOMENT CONNECTION - 4 PLACES)



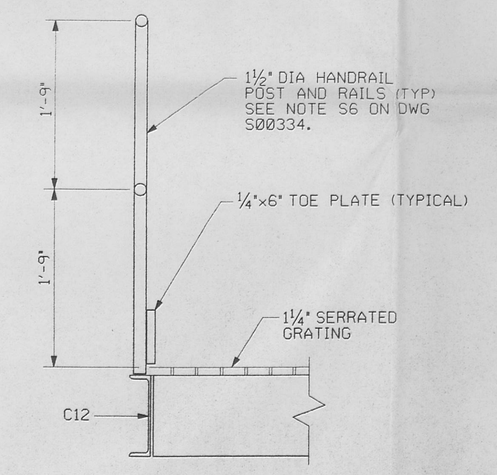
DETAIL 6

1" = 1'-0"



SECTION A

1" =1'-0"



TYPICAL HANDRAIL AT STAIR DETAIL

NOTES

1. FOR GENERAL STEEL NOTES, SEE DRAWING 92X-5900-S-00334.

364

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-S-00334	FRAMING PLAN AND ELEVATIONS
92X-5900-S-00336	FOUNDATION PLAN, SECTIONS, AND DETAILS

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
STRUCTURAL FRAMING SECTIONS AND DETAILS PEDESTRIAN BRIDGE

87

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
E. LESTER	4/04/96	R.B. Dare	7/25/96	G.R. HACKER/R.B.J.	4/26/96

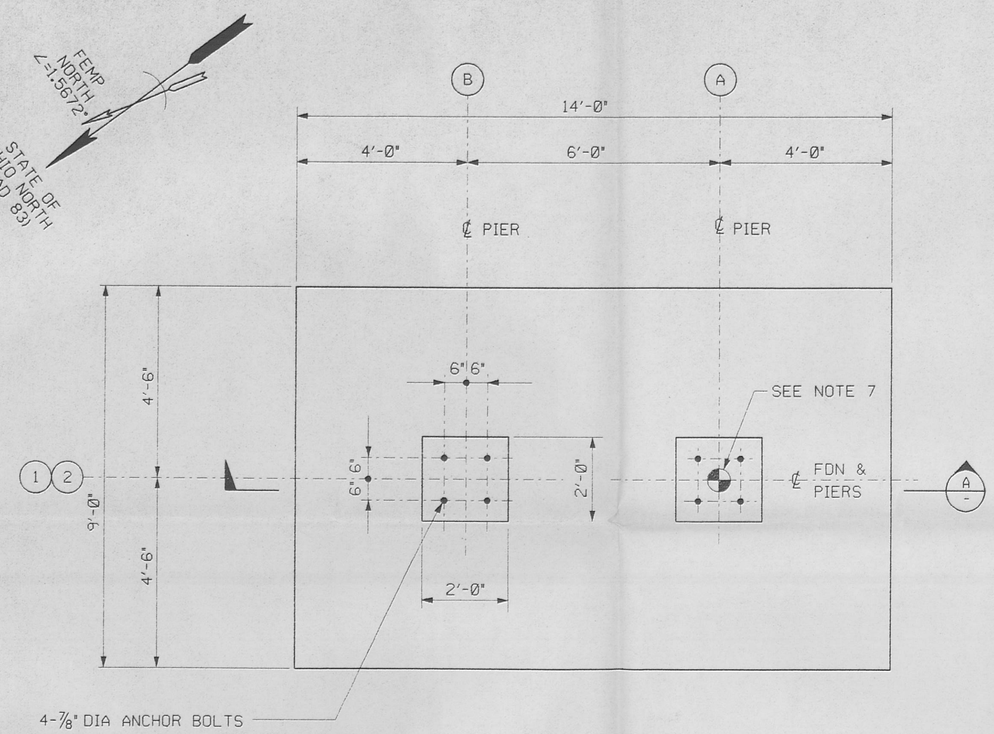
PLANT/BLDG NO.	FLOOR	SCALE	CLASS
		AS NOTED	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NO.
A-E J.M. Wilson 7/25/96 DATE	N/A DATE	20410

DOE PROJECT NO.	TEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-S-00335	S0002	0

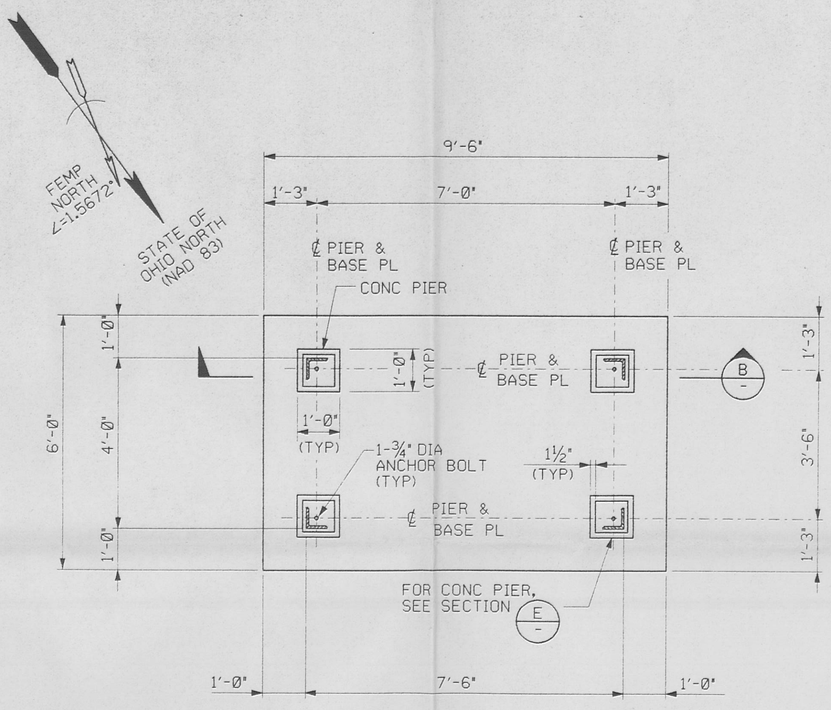
PREPARED UNDER PARSONS PROJECT ORDER NUMBER
0U2/P0158

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER — 7/25/96



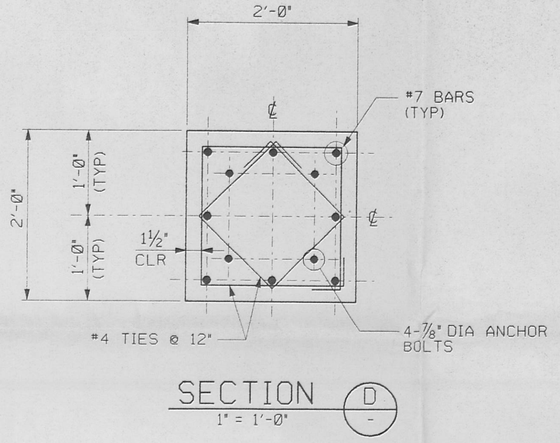
BRIDGE FOUNDATION - PLAN

½" = 1'-0" (2 FDN'S REQ'D)



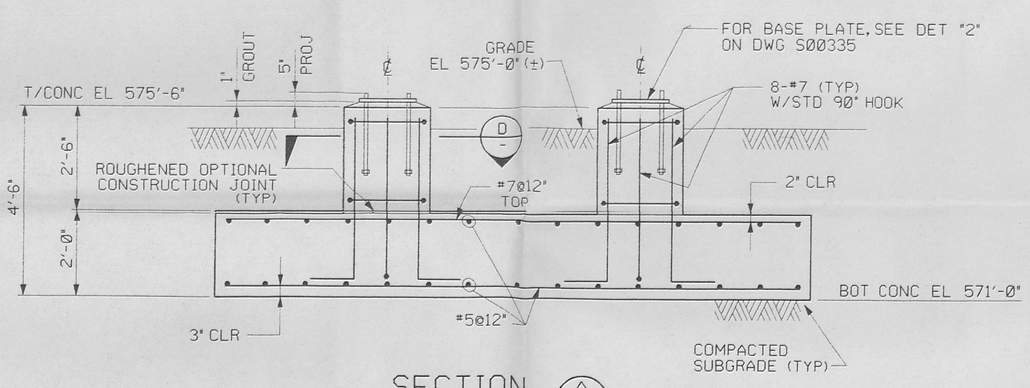
STAIR LANDING FOUNDATION - PLAN

½" = 1'-0" (2 FDN'S REQ'D)



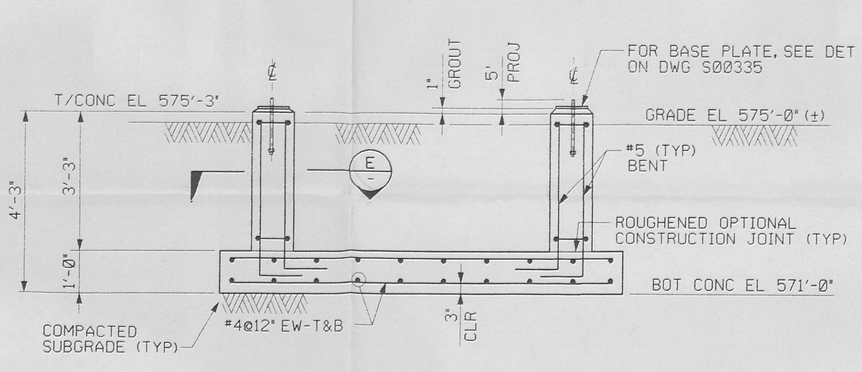
SECTION D

1" = 1'-0"



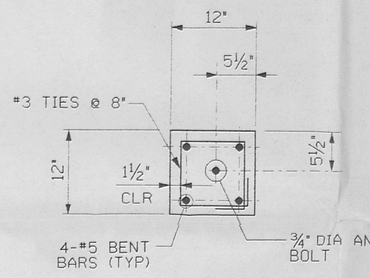
SECTION A

½" = 1'-0"



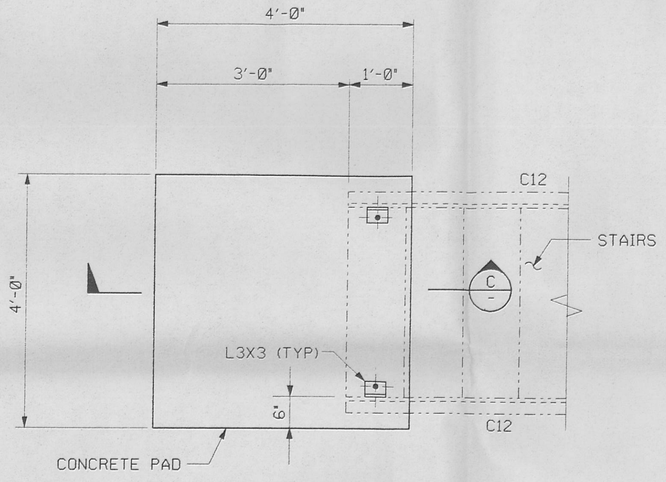
SECTION B

½" = 1'-0"



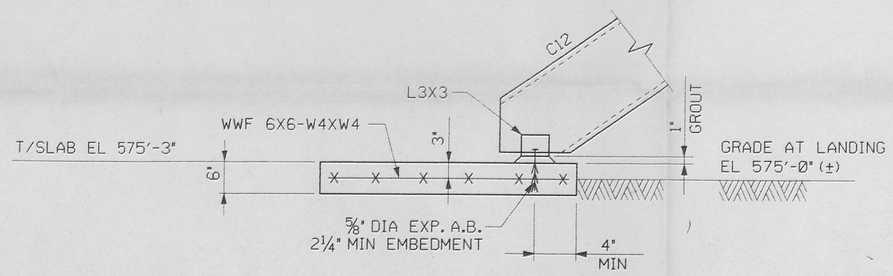
SECTION E

1" = 1'-0"



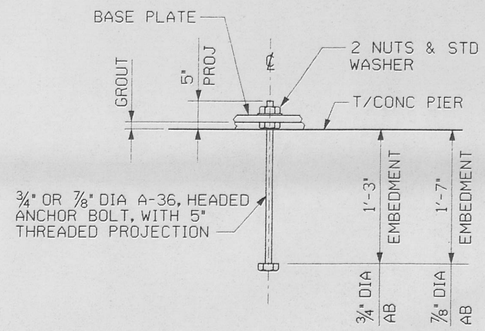
STAIR FOUNDATION - PLAN

½" = 1'-0" (2 FDN'S REQ'D)

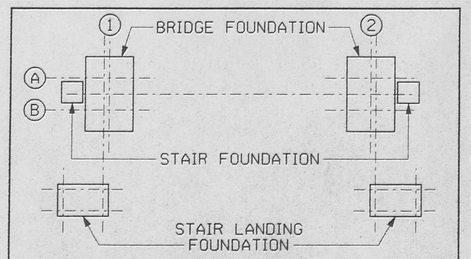


SECTION C

1" = 1'-0"



TYPICAL ANCHOR BOLT DETAIL



KEY PLAN
CONCRETE FOUNDATIONS

NOTES 364

1. FOR GENERAL STEEL NOTES, SEE DRAWING 92X-5900-S-00334.

GENERAL CONCRETE NOTES

1. DESIGN, MATERIAL, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION, AND MATERIAL SPECIFICATIONS, SECTIONS 499, 511, AND 709.01.
2. FOUNDATION CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
3. REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A-615, GRADE 60.
4. WELDED WIRE FABRIC SHALL BE IN CONFORMANCE WITH ASTM A-185.
5. FOUNDATION DESIGN IS BASED ON SOIL BEARING PRESSURE ALLOWABLE OF 2000 PSF, BASED ON THE PRELIMINARY INFORMATION FROM GEOTECHNICAL EXPLORATION (UNO). IF ANY SOFT, WET, ORGANIC, OR LOOSE SOIL, OR ANY OLD FILL IS ENCOUNTERED, FERMCO SHALL BE INFORMED AND THE CONDITIONS RESOLVED BEFORE CONTINUATION OF CONCRETE WORK.
6. GROUT SHALL BE NON SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS, CONFORMING TO ASTM C109 AND ASTM C827.
7. FOR HAUL ROAD AND PEDESTRIAN BRIDGE LOCATION, SEE DRAWING 92X-5900-G-00186.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-S-00334	FRAMING PLAN AND ELEVATIONS
92X-5900-S-00335	FRAMING SECTIONS AND DETAILS
92X-5900-G-00186	PLAN AND PROFILE - SHEET 2 OF 5

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
0	CERTIFIED FOR CONSTRUCTION	JMU 7/25/96	N/A

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION 88

DRAWING TITLE
STRUCTURAL
FOUNDATION PLANS, SECTIONS, AND DETAILS
PEDESTRIAN BRIDGE

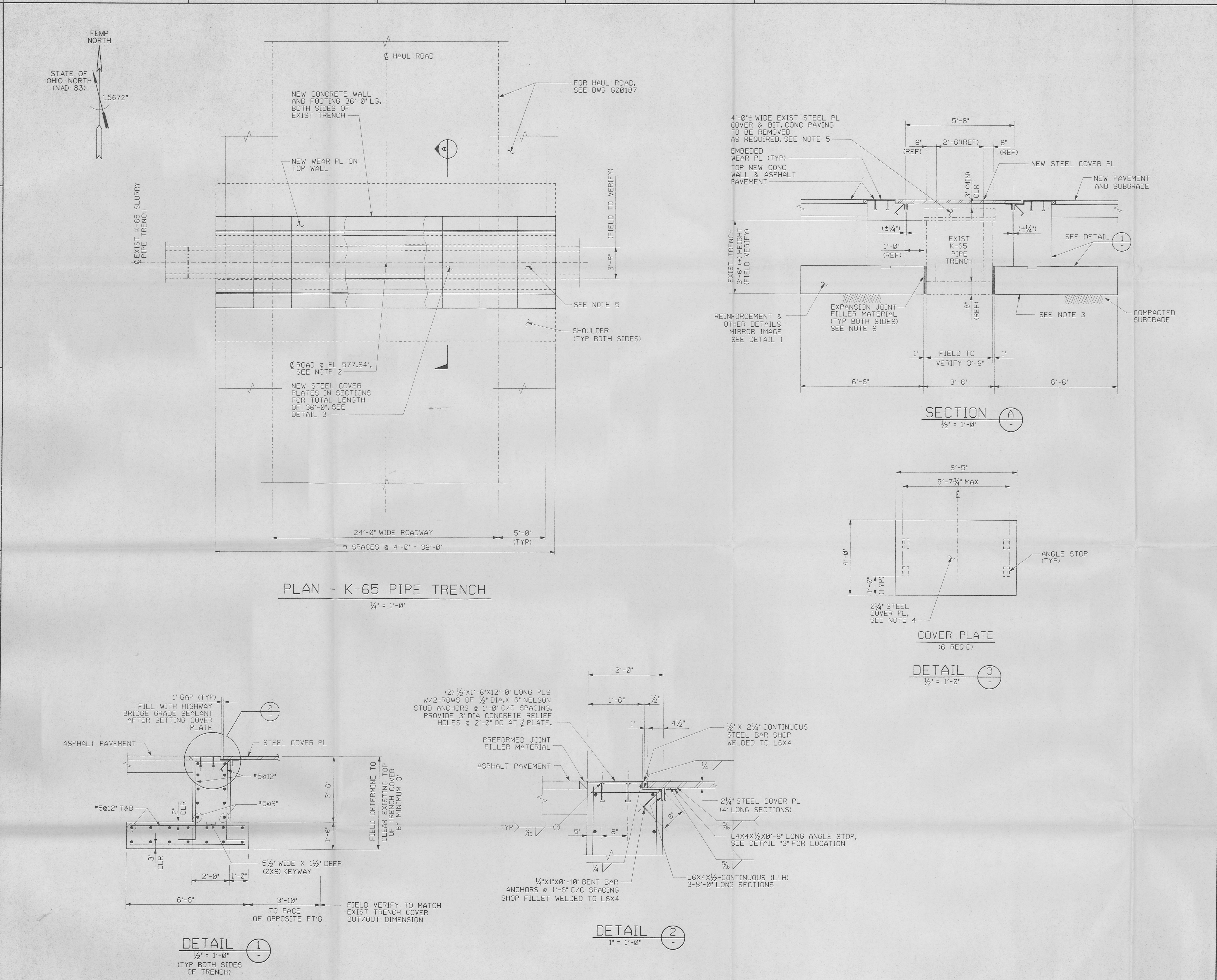
DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
E LESTER	4/04/96	[signature]	7/23/96	G.R. HACKER/R.B.J.	4/26/96

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
	--	¼" = 1'-0"	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NO.
A-E [signature] DATE 7/25/96	N/A DATE	20410

DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-S-00336	S0003	0

[signature] 7/25/96



NOTES

1. FOR GENERAL NOTES, SEE DRAWINGS 92X-5900-S-00334 AND 92X-5900-S-00336.
2. TOP OF STEEL COVER PLATE ELEVATION TO MATCH HAUL ROAD PAVEMENT ELEVATION, SEE DRAWING 92X-5900-G-00187 FOR HAUL ROAD.
3. FOUNDATION DESIGN IS BASED ON BEARING PRESSURE ALLOWABLE OF 1200 PSF, BASED ON EXISTING BLOW COUNT DATA FROM THE NEAREST BORINGS. IF ANY SOFT, WET, ORGANIC, OR LOOSE SOIL, OR ANY OLD FILL IS ENCOUNTERED, FERMCO SHALL BE INFORMED AND THE CONDITIONS RESOLVED BEFORE CONTINUATION OF CONCRETE WORK.
4. FABRICATOR TO FURNISH SLOTTED LIFTING DEVICE, AS REQUIRED, FOR STEEL COVER PLATES.
5. REMOVE EXISTING STEEL PLATE AND PAVING IN THE 36'-0" WIDTH. DETERMINE EXISTING FIELD CONDITIONS BEFORE FABRICATION OF NEW STEEL COVER.
6. USE CONFLEX, FIBER EXPANSION JOINT FILLER MATERIAL AS MANUFACTURED BY MASONITE BUILDING AND INDUSTRIAL PRODUCT GROUP OR APPROVED EQUAL.

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-S-00334	FRAMING PLAN AND ELEVATIONS
92X-5900-S-00336	FOUNDATION PLANS, SECTIONS, AND DETAILS
92X-5900-G-00187	PLAN AND PROFILE - SHEET 3 OF 5

FOR INFORMATION ONLY

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
0	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

INITIALS AND DATE

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION — 89

DRAWING TITLE: STRUCTURAL FOUNDATION PLAN, SECTIONS, AND DETAILS K-65 UTILITY TRENCH ROAD CROSSING

DRAWN BY: E. LESTER — DATE 4/17/96 — LEAD ENGINEER: [signature] — DATE 7/25/96 — CHECKED BY: G.R. HACKER/R.B.J. — DATE 4/26/96
PLANT/BLDG NO. — FLOOR — SCALE 1/4" = 1'-0" — CLASS
SUBMITTED FOR APPROVAL: A-E [signature] DATE 7/25/96 — FERMCO CRU APPROVAL N/A — FERMCO PROJECT NO. 20410
DOE PROJECT NO. — FEMP PROJECT NO. WBS 1.1.1.1.2.3.6 00-90701 — DATE — DRAWING INDEX CODE NO. 92X-5900-S-00337 — SHEET NO. S0004 — REV. NO. 0

PREPARED UNDER PARSONS PROJECT ORDER NUMBER 0U2/P0158

STATE OF OHIO ... PROFESSIONAL ENGINEER [seal, signature] 7/25/96